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TREATMENT FOR STIMULANT USE DISORDERS (TIP 33) MODULE 4

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This distance learning course package was developed for CEU Matrix John Tinsley, PhD. It is based on information found in SAMHSA Publication No. PEP21-02-01-004.

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TREATMENT FOR STIMULANT USE DISORDERS (TIP 33) MODULE 4

In Module 4 readers will learn that:

- Vulnerable populations are people of diverse racial/ethnic backgrounds, women (including those who are pregnant), MSM, transgender and gender nonbinary communities, adolescents, people experiencing homelessness/unstable housing, rural populations, people involved in the criminal justice system, people taking medication for opioid use disorder, people who inject drugs, people with or at risk for HIV/AIDS and hepatitis, and individuals with co-occurring mental disorders.
- Populations that experience health disparities related to systems of care and engagement in care may have higher rates of stimulant use disorder and increased issues accessing care for stimulant use disorders.
- By understanding the needs, SUD care access issues, and treatment considerations of these populations, clinicians will be more likely to provide patient-centered, effective care that maximizes rapport and treatment engagement.
- Services can be tailored to each of these populations to account for their unique risk factors, patterns of use, and health considerations.

Treatment for Stimulant Use Disorders

UPDATED 2021

TREATMENT IMPROVEMENT PROTOCOL

TIP 33

SAMHSA

Substance Abuse and Mental Health
Services Administration

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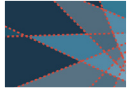
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Foreword

The Substance Abuse and Mental Health Services Administration (SAMHSA) is the U.S. Department of Health and Human Services agency that leads public health efforts to reduce the impact of substance abuse and mental illness on America's communities. An important component of SAMHSA's work is focused on dissemination of evidence-based practices and providing training and technical assistance to healthcare practitioners on implementation of these best practices.

The Treatment Improvement Protocol (TIP) series contributes to SAMHSA's mission by providing science-based, best-practice guidance to the behavioral health field. TIPs reflect careful consideration of all relevant clinical and health services research, demonstrated experience, and implementation requirements. Select nonfederal clinical researchers, service providers, program administrators, and patient advocates comprising each TIP's consensus panel discuss these factors, offering input on the TIP's specific topics in their areas of expertise to reach consensus on best practices. Field reviewers then assess draft content and the TIP is finalized.

The talent, dedication, and hard work that TIP panelists and reviewers bring to this highly participatory process have helped bridge the gap between the promise of research and the needs of practicing clinicians and administrators to serve, in the most scientifically sound and effective ways, people in need of care and treatment of mental and substance use disorders.

My sincere thanks to all who have contributed their time and expertise to the development of this TIP. It is my hope that clinicians will find it useful and informative to their work.

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Executive Summary

Introduction

Since the 1980s, stimulant use has wreaked havoc on individuals and communities across the United States and has prompted strong responses from federal, state, and local governments and organizations. For example, the relatively minor problems caused by cocaine use in the 1960s and 1970s have grown to become major medical and law enforcement issues.

Similarly, the increasing use of methamphetamine (MA) has led policymakers, public officials, and service providers to increase efforts to fight its spread. For example, concerns that MA use would become epidemic led to passage of the Combat Methamphetamine Epidemic Act of 2005 and the incorporation of MA-specific provisions in the Comprehensive Addiction and Recovery Act of 2016. Misuse of prescription stimulants such as methylphenidate has also become a growing concern.

The explosive growth of stimulant use has also triggered a flurry of research. The results are tremendous advances in understanding stimulant use disorders, the basic functioning of the brain, and substance use disorders (SUDs) in general. Yet reports that describe the fundamentals of stimulant use disorder treatment and the success of various treatment interventions are still needed.

This Treatment Improvement Protocol (TIP) reviews what is currently known about treating the medical, psychiatric, and SUD-related problems associated with the use of cocaine and MA and the misuse of prescribed stimulants (such as those for the treatment of attention deficit hyperactivity disorder [ADHD]).

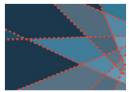
The scientifically based information in this TIP is presented in a manner that makes it accessible and relevant to behavioral health service clinicians and other frontline SUD treatment providers, including healthcare service providers (e.g., in primary care settings, in emergency departments). The TIP offers recommendations on treatment approaches, strategies for planning and initiating treatment, recommendations on how to maximize treatment engagement and retention, and strategies for initiating and maintaining abstinence. Also included are recommendations for the medical management of people who use stimulants and recommendations regarding special populations and settings.

The Substance Abuse and Mental Health Services Administration (SAMHSA) first published this TIP in 1999. SAMHSA implemented a full-scale review and revision of the original TIP. Content now addresses:

- Recent research on stimulant use disorders.
- The increasing number of overdose deaths in the United States attributable to cocaine and MA (especially when combined with other substances, like synthetic and semisynthetic opioids).
- The rise in the use and misuse of prescription stimulants (leading to increased risk and incidence of diversion).

This TIP revision:

- Uses terminology that is person centered and aligned with language in the latest edition of the *Diagnostic and Statistical Manual of Mental Disorders*.
- Incorporates findings from research published since 2010 (and where possible, since 2016).
- Includes key messages at the beginning of every chapter to guide readers in understanding from the outset the core content they are about to read.
- Updates statistics and related information about stimulant use, treatment, overdose, and legislation in the United States.



- Provides a more focused discussion of the neurobiology of stimulant use disorders than the original TIP's broad primer on the topic.
- Reflects updated empirical evidence that supports using contingency management (CM), cognitive-behavioral therapy (CBT), community reinforcement, and motivational interviewing (MI) to treat stimulant use disorders—as well as recent evidence for other nonpharmacologic treatments with some support (like exercise and mindfulness techniques).
- Includes no discussion of pharmacotherapy options, given that all prescribing for stimulant use disorders is done off label (that is, no Food and Drug Administration [FDA]-approved medication for any stimulant use disorder currently exists).
- Expands the discussion of special populations with unique treatment needs to cover racial/ethnic minorities, women (including those who are pregnant), men who have sex with men (MSM), transgender and gender nonbinary community members, adolescents, people experiencing homelessness/unstable housing, rural populations, people involved with the criminal justice system, people taking opioid use disorder medication, people who inject drugs, people with or at risk for HIV/AIDS, people with or at risk for hepatitis, and individuals with co-occurring mental disorders.

The purpose of this TIP is to advance the understanding of treating the SUDs associated with the use of cocaine and MA and the misuse of prescription stimulants. This TIP is organized to guide behavioral health service providers, healthcare service providers, and other addiction and allied professionals sequentially through the primary components of proper identification and management of stimulant use disorders. The TIP is divided into seven chapters so that readers can easily find the material they need most. Below is a summary of the TIP's main points and brief summaries of the first six chapters. (The seventh chapter is a listing of resources.)

Overall Key Messages

Stimulant use disorders are a growing problem in the United States, with more than 5 million people age 12 and older reporting past-year cocaine use, nearly 2 million reporting MA use, and almost 5 million reporting prescription stimulant misuse in 2019. Stimulant-related overdose fatalities are also on the rise, with the incidence of stimulant-related deaths more than tripling between 2010 and 2017.

Stimulant use disorders have a powerful neurobiological basis that includes changes in brain chemistry and functioning that in turn help drive stimulant use behaviors. But stimulant use disorders also have a social and environmental component that clinicians need to consider in trying to understand patients' stimulant use behaviors, difficulties in achieving and maintaining abstinence, and potential unwillingness to engage in formal SUD treatment.

Healthcare providers need to understand the medical complications of stimulant use, their clinical signs and symptoms, and appropriate management approaches. Behavioral health service providers should learn to recognize the medical complications of stimulant use so they can make quick and successful referrals to medical treatment as needed.

Ample research supports the use of CM as the primary psychosocial treatment for stimulant use disorders. The lack of FDA-approved pharmacotherapies for stimulant use disorders makes it vital for clinicians to learn about and offer psychosocial interventions (e.g., CM, CBT) and other nonpharmacologic services that have empirical support (e.g., mindfulness practices, family/couples counseling, the Matrix model of treatment).

Clinicians should consider a variety of factors in assessing why people with stimulant use disorders have sought treatment and what their individual treatment needs are. Clinicians can make treatment engagement—as well as treatment completion—more likely by maximizing access; addressing treatment ambivalence; training staff on how to provide respectful, patient-centered services; developing a well-thought-out treatment plan; and using techniques that help patients initiate and maintain abstinence.

Certain populations may be at an increased risk for stimulant use or, once they start using stimulants, may be at higher risk for negative outcomes (like contracting HIV). **Such populations—including women, people living in rural areas, people of diverse racial/ethnic backgrounds, MSM, and people experiencing homelessness/housing instability—may benefit from targeted treatment engagement techniques, interventions, and monitoring approaches that are tailored to their unique needs and challenges.**

Content Overview

This TIP is divided into seven chapters designed to thoroughly cover all relevant aspects of stimulant use disorders.

Chapter 1: Introduction

This chapter provides a broad introduction to stimulant use disorders and trends in stimulant use in the United States. The chapter also describes the goals and scope of the TIP as well as its intended audiences.

In Chapter 1, readers will learn about:

- Current rates of stimulant use disorders and overdose in the United States, including overdose involving the combination of stimulants with synthetic opioids (e.g., fentanyl) or semisynthetic opioids (e.g., heroin).
- Recent trends that are making stimulant use more lethal, such as the use of stimulants in combination with opioids or the increasing purity and decreasing price of cocaine and MA.
- The ongoing unmet treatment needs of people with stimulant use disorders, as well as the need for efforts to improve treatment retention.
- Rates of prescription stimulant misuse and how prescribers can help combat diversion.
- Legislation and regulations relevant to patients with stimulant use disorders and behavioral health and healthcare service providers who work with them.

Chapter 2: How Stimulants Affect the Brain and Behavior

This chapter reviews the ways in which brain structures, functions, and neurochemistry are altered in the presence of stimulants. The chapter also looks at the role of these alterations in the development and persistence of a stimulant use disorder.

In Chapter 2, readers will learn that:

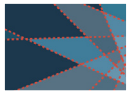
- Neurological reinforcement systems (i.e., the reward system, the stress system) and other brain structures and mechanisms underlie the occurrence of stimulant use disorders and influence key aspects of stimulant use disorders, like craving and memory dysfunction.
- Brain imaging technology has played an important role in helping researchers and clinicians understand the ways in which short- and long-term stimulant use can affect the brain.
- Stimulants alter the dopamine system in ways that can affect substance use. For instance, increased feelings of pleasure and euphoria when using a stimulant can reinforce its use.
- Providers should be aware of the specific medical and psychological acute and chronic effects of each of the three main types of stimulants generally used by individuals with stimulant use disorders: cocaine, MA, and prescription stimulant medication, such as methylphenidate for ADHD.

Chapter 3: Medical Aspects of Stimulant Use Disorders

This chapter describes medical and psychological signs, symptoms, and complications associated with stimulant use and stimulant use disorders and how to best manage common complications.

In Chapter 3, readers will learn that:

- The signs, symptoms, and harmful effects of stimulant use will vary depending on route of administration, dose, drug purity, level of intoxication, experience of withdrawal, chronicity, use history, and more.



- Medical complications of stimulant use can be serious and in some cases life threatening; these complications include cardiovascular disease, respiratory effects, cerebrovascular dysfunction, muscular and renal toxicity, gastrointestinal complaints, infections (including HIV), and hepatitis.
- Psychological complications include psychosis, aggression, and violence.
- People with stimulant use disorders often grapple with co-occurring disorders and conditions that can complicate diagnosis, treatment, and recovery. These disorders and conditions are secondary substance use (especially co-occurring opioid use), specific mental disorders (e.g., depression, anxiety, ADHD), medical conditions (e.g., dental problems, vein and nerve damage in the arm, cardiovascular disorders), and traumatic injury (e.g., due to violence/physical altercations).
- Patients' psychological reactions to stimulant use, like psychosis and violent behaviors, can also result in self-harm or harm to others if not managed properly.
- Coordinated care between medical and SUD treatment programs is a major aspect of properly identifying and treating co-occurring disorders and conditions of people with stimulant use disorders. Many patients will first appear for treatment or services in non-SUD settings—mainly primary care clinics and emergency departments.
- CM is by far the psychosocial treatment with the greatest scientific support. In some studies, CM is even more effective when used in combination with other psychosocial treatments, like community reinforcement.
- After CM, the three other psychosocial interventions with the most support are CBT, community reinforcement, and MI.
- Other forms of psychosocial treatment with less but still some support are the Matrix model, behavioral family or couples therapy, and case management/coordinated care.
- There is growing evidence that physical exercise, mindfulness, and transcranial magnetic stimulation also may help people with stimulant use disorders reduce their stimulant use or otherwise improve their health and well-being.
- Not all people with stimulant use disorders will be interested in formal SUD treatment. Offering harm reduction tools and strategies is critical because they can help people who continue to use stimulants stay alive. Harm reduction involves providing access to or information about:
 - Needle/syringe exchanges.
 - Fentanyl test strips (to determine whether drugs have been laced with fentanyl).
 - The opioid overdose reversal agent naloxone.
 - HIV prevention education.
- Rather than using a cookie-cutter approach to treatment selection (e.g., sending all patients to 60-day residential treatment), clinicians should consider each individual's unique SUD history and treatment needs and preferences. The American Society of Addiction Medicine's patient placement criteria can help guide the treatment selection process.

Chapter 4: Approaches to Treatment

This chapter describes the best supported nonpharmacologic approaches to helping patients begin and sustain recovery from stimulant use disorders.

In Chapter 4, readers will learn that:

- There are no FDA-approved medications for managing stimulant use disorders. This makes understanding available nonpharmacologic treatment options imperative.

Chapter 5: Practical Application of Treatment Strategies

This chapter briefly summarizes techniques clinicians can use to help engage patients in SUD treatment and maximize their chances of sustaining long-term recovery.

In Chapter 5, readers will learn that:

- People seek treatment for any number of reasons, and clinicians will better understand how to help their patients engage and stay in treatment if they know why their patients are entering treatment.
- Factors that can make treatment engagement more likely include:
 - Identifying barriers to treatment engagement.
 - Making treatment highly accessible.
 - Providing support for treatment participation.
 - Offering multiple treatment options.
 - Discussing with patients their expectations for treatment and any ambivalence they may have about treatment.
 - Working collaboratively with patients to develop a clear, flexible treatment framework.
- Staff should be educated about how to provide person-centered, respectful, empathic services, which can help encourage patients to stay engaged in treatment.
- To start treatment off “on the right foot,” clinicians should work with patients to set their treatment goals, fully assess their clinical needs, discuss reducing or discontinuing all substance use, and help them manage stimulant withdrawal symptoms.
- Treatment retention is critical. Simply put, people are less likely to die when in treatment than when not in treatment. Any amount of time people with stimulant use disorders remain in treatment is an opportunity for them to stay alive and improve their health.
- Many strategies can help patients maintain progress in recovery, such as teaching functional analysis of stimulant use; reinforcing positive behaviors with incentives; teaching strategies to avoid high-risk situations; offering relapse prevention techniques; and promoting connections to family, friends, and the community.
- Other services that can help patients maintain recovery are vocational counseling, social skills training, relationship counseling, mutual-help support programs, and wellness counseling. Clinicians should offer referrals for these services as needed.

Chapter 6: Treatment Considerations for Special Populations

This chapter discusses numerous populations that may be at increased risk for developing a stimulant use disorder or for experiencing negative outcomes associated with stimulant use (e.g., contracting HIV or hepatitis) and prescription stimulant misuse. These populations may require tailored assessment, treatments, or education to meet their unique needs and circumstances.

In Chapter 6, readers will learn that:

- Vulnerable populations are people of diverse racial/ethnic backgrounds, women (including those who are pregnant), MSM, transgender and gender nonbinary communities, adolescents, people experiencing homelessness/unstable housing, rural populations, people involved in the criminal justice system, people taking medication for opioid use disorder, people who inject drugs, people with or at risk for HIV/AIDS and hepatitis, and individuals with co-occurring mental disorders.
- Populations that experience health disparities related to systems of care and engagement in care may have higher rates of stimulant use disorder and increased issues accessing care for stimulant use disorders. They may also be more likely to experience secondary negative consequences related to these vulnerabilities (e.g., trauma or communicable diseases).
- By understanding the needs, SUD care access issues, and treatment considerations of these populations, clinicians will be more likely to provide patient-centered, effective care that maximizes rapport and treatment engagement.
- Services can be tailored to each of these populations to account for their unique risk factors, patterns of use, and health considerations. Clinicians may need to seek guidance from experts in these populations when tailoring treatment.

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TIP Development Participants

Note: The information given for participants in the TIP's development indicates their affiliations at the time of their participation and may not reflect their current affiliations.

Consensus Panel

Each Treatment Improvement Protocol's (TIP) consensus panel is a group of primarily nonfederal addiction-focused clinical, research, administrative, and recovery support experts with deep knowledge of the TIP's topic. With the Substance Abuse and Mental Health Services Administration's Knowledge Application Program team, members of the consensus panel develop each TIP via a consensus-driven, collaborative process that blends evidence-based, best, and promising practices with the panel members' expertise and combined wealth of experience.

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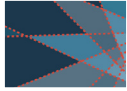
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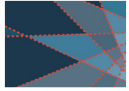
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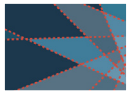
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Chapter 6—Treatment Considerations for Special Populations

KEY MESSAGES

- Populations that experience health disparities related to systems of care and engagement in care may experience higher rates of stimulant use disorder and increased issues with accessing care for stimulant use disorders, and may be more likely to experience secondary negative consequences related to these vulnerabilities (e.g., trauma, communicable diseases).
- Clinicians should strive to understand the needs of special populations, as well as the access-to-care issues and treatment considerations they face. In doing so, clinicians are more likely to provide patient-centered, effective stimulant use disorder care that maximizes rapport and treatment engagement.
- When possible, clinicians should tailor their services to members of special populations to accommodate a given population's particular needs. Examples include having gender-responsive treatment programs for women or programs specifically designed for populations that may experience xenophobia or racism within the healthcare system. Clinicians may need to seek guidance from experts in these special populations when tailoring treatment.

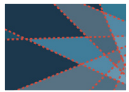
This chapter discusses stimulant use disorder risks and care considerations specific to the following populations:

- Racial/ethnic minorities
- Women (including those who are pregnant)
- Men who have sex with men (MSM)
- Transgender and gender nonbinary (TGNB) community
- Adolescents
- People experiencing homelessness/unstable housing
- Rural populations
- People involved with the criminal justice system
- People taking medication for opioid use disorder (OUD)
- People who inject drugs (PWID)
- People with or at risk for HIV/AIDS
- People with or at risk for hepatitis
- Individuals with co-occurring mental disorders

If a patient with a substance use disorder (SUD) identifies with one or more of these groups, treatment must be informed by a solid understanding of the needs of the group or groups.

Considerations for each special population include:

- Location of treatment centers and community-based organizations.
- Availability of drop-in centers.
- Availability of nonconfrontational programs.
- Treatment approaches that include more time in the engagement phase prior to counseling.
- Treatment that offers individualized approaches, encourages the establishment of safe relationships, allows time for trust to develop, and assesses the level of motivation for change.



- Availability of clinicians trained to help patients identify their own ethnic issues.
- Clinicians matched to patients by cultural understanding (not necessarily racial/ethnic background).

Racial/Ethnic Minority Populations

One of the most important aspects of improving access and developing treatment options for diverse racial/ethnic minority populations is cultural responsiveness in providing care. Cultural responsiveness in the SUD care setting involves clinicians understanding and being responsive to the health beliefs, mores, practices, and values of diverse populations while simultaneously exploring the effects of ethnocentrism and racism on their caring process. For more information on cultural responsiveness, see the Substance Abuse and Mental Health Services Administration's (SAMHSA) Treatment Improvement Protocol (TIP) 59, *Improving Cultural Competence* (<https://store.samhsa.gov/product/TIP-59-Improving-Cultural-Competence/SMA15-4849>). In addition, treatment providers need to understand the culture of their own organization and determine how it may or may not be welcoming to members of other cultures.

Black/African American Populations

This TIP uses the term “Black/African American” to broadly include all people who identify as African American and/or Black in the United States (Center for Behavioral Health Statistics and Quality [CBHSQ], 2020a).

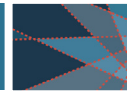
The 2019 National Survey on Drug Use and Health (NSDUH) found that, among Blacks/African Americans age 12 and older, an estimated 1.6 percent (about 521,000) used cocaine and 0.2 percent (about 81,000) used methamphetamine (MA; CBHSQ, 2020a). Compared with people from other racial/ethnic groups, Black/African American populations have had a disproportionately higher risk of cocaine use, cocaine use disorder, frequent

cocaine use, and medical and social problems stemming from cocaine use (Palamar et al., 2015; Zapolski et al., 2016). However, rates of cocaine use among Black/African American adults age 18 and older have been consistently declining in recent years (SAMHSA, 2020b).

MA use has decreased significantly since 2017 among Blacks/African Americans ages 18 to 25, but among those age 26 and older, it leveled off from 2016 to 2018 and then increased by about 24,000 in 2019 (SAMHSA, 2020b). About 2.4 percent of Blacks/African Americans ages 18 through 25 (about 111,000) reported past-year prescription stimulant misuse in 2019, compared with 0.5 percent (about 118,000) of Blacks/African Americans age 26 and older (CBHSQ, 2020a).

The Black/African American community has a history of being arrested, prosecuted, convicted, and imprisoned for offenses involving cocaine (and crack specifically) at higher rates than other racial/ethnic groups and the general population. This is due in part to the 1980s' and 1990s' “war on drugs” approach to prohibiting illicit substances in the United States, which increased the percentage of Blacks/African Americans in state and federal prisons (Dumont et al., 2013).

The strict sentencing laws passed during these decades largely targeted cocaine—and crack cocaine especially. Because crack was more accessible in urban areas than in suburban and rural communities, these stiff sentences resulted in more Blacks/African Americans being incarcerated for cocaine offenses compared with other racial/ethnic groups (Murch, 2015). In fact, crack cocaine carried a federal mandatory minimum sentencing penalty that outweighed powder cocaine—more often used by White Americans—10 to 1 (Murch, 2015). By 2015, the sentencing disparity between crack and powder cocaine was 18 to 1 (Palamar et al., 2015).



STRUCTURAL RACISM AND STIMULANT USE DISORDERS

Beyond developing cultural responsiveness, clinicians also need to be aware of how structural racism, also called systemic racism (that is, racism embedded in social structures and institutions), may be affecting their racial/ethnic minority patients with stimulant use disorders.

Aspects of structural racism and discrimination—like stigma, socioeconomic marginalization, and political bias—have been shown to affect the way healthcare and behavioral health service clinicians diagnose, treat, and interact with people of color (Bailey et al., 2017; Metzl & Roberts, 2014). For instance, the historically disproportionate rates of schizophrenia diagnosed in Black/African American men appear to reflect discriminatory beliefs among clinicians who automatically labeled people with psychosis as aggressive, violent, combative, hostile, and emotionally unstable and who also tended to characterize Black/African American men this way (Metzl & Roberts, 2014). Further, unequal distribution of healthcare resources (e.g., clinics, providers) means people in low-income neighborhoods more often experience a lack of access to high-quality care—or a lack of access to any care—compared with people in higher income areas (Bailey et al., 2017).

One of the most notable historical examples of structural racism affecting people with SUDs can be seen in the response to the crack cocaine epidemic of the 1980s. In the 1980s' "war on drugs," implementation of aggressive policing and harsh sentencing laws for the possession and distribution of crack cocaine differentially affected communities of color and intensified existing social, legal, and healthcare inequalities between Whites and communities of color—notably Black/African American and Hispanic/Latino communities (Rosino & Hughey, 2018). This is in part because crack cocaine possession and distribution were more prevalent in urban neighborhoods—ones less likely to be populated by Whites. Notably, however, lengthier prison sentences are not associated with reduced self-reported drug use, drug overdose deaths, and drug arrests across states (Pew Charitable Trusts, 2018), suggesting that the harsh crack cocaine-related sentencing in the "war on drugs" was not an effective deterrent.

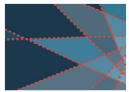
Structural racism persists today within the SUD treatment system (Knight, 2020; Kunins, 2020; Metzl & Roberts, 2014; Rosino & Hughey, 2018). SUD treatment providers and SUD program staff need training not just in cultural responsiveness but in understanding structural racism and unconscious bias so they can better recognize and respond to the barriers facing patients of color (SAMHSA, 2014). Individually, clinicians must be willing to engage in open, nonjudgmental discussions with patients about their racial identities. Such discussions can help clinicians better understand whether and how bias and discrimination are affecting their patients' SUDs and recovery.

Clinicians need to remain present and undistracted during these conversations and be prepared to devote the necessary time and number of sessions to fully exploring issues of racism with their patients. Critical self-analysis is vital to helping clinicians become more aware of their own beliefs and attitudes toward race and the ways they can address structural racism in their own institutions and practices (SAMHSA, 2020i).

On a macro level, clinicians can help transform systemic inequities in the healthcare and behavioral health service systems by (Evans et al., 2020):

- Addressing workforce barriers (e.g., lack of people of color on staff).
- Promoting research, grant-funding, and organizational efforts (e.g., making more of an effort to interview and hire people of color as faculty) for trainees/providers of color.
- Openly recognizing the presence of structural racism and the inequities it has caused and continues to cause.

Behavioral health service clinicians can learn more about structural racism and mental health services by visiting the website of the American Psychiatric Association's (APA) Presidential Task Force to Address Structural Racism Throughout Psychiatry (<https://www.psychiatry.org/psychiatrists/structural-racism-task-force>), which includes continuing medical education programs (for psychiatrists), recommended reading, and video recordings of town halls that address structural racism.



Clinicians working with Black/African American patients should be aware of and sensitive to this difficult history. The “war on drugs” has contributed to the Black/African American experiences of historical trauma, racial bias, and discrimination (Conner, 2020). Black/African American patients may have unresolved grief, deep emotional pain, and strong mistrust related to these experiences, which can create hesitancy to engage with SUD treatment and speak openly about their current or past substance use. Black/African American patients may express hesitancy to initiate treatment for SUDs because of fears about criminal prosecution.

Certain protective factors may help reduce substance use among Blacks/African Americans (Sanders, 2015). Strategies that clinicians can use, as appropriate, to leverage these protective factors include:

- Involving extended family members and nonrelatives with kinship-like ties to the patient in the patient’s recovery when needed and appropriate.
- Incorporating spirituality and spiritual beliefs into treatment, such as using spiritually based coping skills or providing access to SUD treatment in spiritual settings (Jordan et al., 2021).
- Using humor when appropriate.

A sense of belonging to a larger community and a concern for its well-being can also contribute to resilience in Black/African American patients (Sanders, 2015). Clinicians can help build rapport with Black/African American patients and improve their treatment engagement by:

- Acknowledging and empathizing with the historical trauma of racism and discrimination experienced by Black/African American patients (Komaromy et al., 2021; Sanders, 2015).
- Using trauma-informed techniques to manage distress associated with racial trauma that may be perpetuating substance use and impeding recovery, and connecting patients to treatment settings that have a lower risk of retraumatization (Komaromy et al., 2021).

- Being willing to talk about race and racism in sessions (Sanders, 2015).
- Helping patients focus on their strengths and resilience (e.g., talents, support systems, instances from their life where they experienced success) in a system with significant structural racism (Sanders, 2015).
- Giving patients choices and opportunities to make decisions, rather than dictating to them how treatment will go and what will happen (Sanders, 2015).
- Remembering that there are many pathways to recovery, and the one that works best for a particular patient might be different than what works best for other patients (Sanders, 2015).

To learn more about how to work effectively with Black/African American patients who have SUDs (including stimulant use disorders), see SAMHSA’s TIP 59, *Improving Cultural Competence* (<https://store.samhsa.gov/product/TIP-59-Improving-Cultural-Competence/SMA15-4849>), and NAADAC’s free webinar (<https://www.naadac.org/counseling-african-americans-with-substance-use-disorders>) on this topic.

Hispanic/Latino Populations

According to the 2019 NSDUH, 2 percent of Hispanics/Latinos age 12 and older (about 970,000) used cocaine in the past year, and 0.6 percent (about 288,000) used MA (CBHSQ, 2020a). Past-month cocaine use was steady from 2016 to 2019 among Hispanics/Latinos age 26 and older but increased from 1.3 percent in 2018 to 1.6 percent in 2019 among those ages 18 to 25 (SAMHSA, 2020e).

MA use in Hispanics/Latinos ages 18 to 25 declined from 2017 (1.1%) to 2018 (0.7%) and remained relatively unchanged in 2019. However, in Hispanics/Latinos age 26 and older, MA use increased from 2017 (0.6%) to 2018 (0.8%) and then decreased slightly in 2019 (0.7% [SAMHSA, 2020e]).

Prescription stimulant misuse has been steadily decreasing since 2016 (from 5.2% to 3.4% in 2019) among Hispanics/Latinos ages 18 to 25 and has been relatively unchanged (around 0.7%) among those age 26 and older (SAMHSA, 2020e).

The treatment rate for Hispanic/Latino populations in need of SUD care is extremely low, with almost 92 percent of the 3.2 million Hispanic/Latino people age 12 and older with an SUD in 2019 receiving no treatment (CBHSQ, 2020a). There may be several reasons for this gap. Clinicians may not recognize that subgroups of Hispanic/Latino populations—such as Mexicans, Puerto Ricans, Cubans, Central or South Americans, and Spanish individuals—are highly diverse and often differ in their substance use attitudes, behaviors, and ability to access treatment in the traditional medical setting. This heterogeneity is due in part to differences in these subgroups' degree of acculturation, immigration patterns, and geographic location (Chartier et al., 2015; SAMHSA, 2014). These groups may also differ in their race, language, and indigenous ties. All of these subgroup differences might have an effect on treatment engagement, retention, and completion (Chartier et al., 2015).

Language is another barrier for Hispanic/Latino engagement and retention in treatment for SUDs (SAMHSA, 2014). Where possible, SUD care should incorporate multilingual staff and offer culturally appropriate services (SAMHSA, 2014). For example, bicultural care providers have demonstrated improved SUD treatment outcomes for Hispanic/Latino populations (SAMHSA, 2014).

In a small qualitative study of treatment seeking among Hispanic/Latino individuals with SUDs, common reasons people gave for not seeking SUD care were (Pinedo et al., 2018):

- Experiencing cultural barriers, such as feeling as though clinicians did not understand Latino culture or that seeking treatment itself was not acceptable in Latino culture.
- Believing that treatment would not be effective or that clinicians did not have a lived experience with substance use problems and thus could not effectively help the patient.
- Not wanting to pursue abstinence, but rather, harm reduction (e.g., limiting intake).
- Feeling as though treatment was unnecessary because functioning did not seem impaired (e.g., no substance-related work absences, no significant family problems related to substance use).

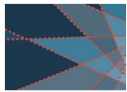
- Fearing stigma (e.g., being seen as “weak” by others for seeking treatment).
- Lacking family support for treatment.
- Experiencing logistical difficulties (e.g., no health insurance; long waits to be seen by a clinician).

Clinicians can overcome some of these barriers and help improve treatment outcomes for Hispanic/Latino patients by (Pinedo et al., 2018; SAMHSA, 2014):

- Learning about Hispanic/Latino culture and subcultures and understanding how substance use and accessing treatment are viewed within each.
- Incorporating Hispanic/Latino cultural values and concepts into sessions, such as *familialismo* (valuing the family and its needs over that of any one individual) and *respeto* (showing respect to a person based on their age and gender).
- Emphasizing the scope (and also limitations) of confidentiality. This might be especially important for a patient who is undocumented and who may worry that being open and honest about substance use could lead to deportation.
- Being creative in service delivery to help the patient avoid stigma and to protect the patient's privacy and anonymity. For instance, clinicians might want to offer web-based treatment when possible and appropriate, or consider integrating services within a primary care setting.
- Including the patient's family in sessions—with patient permission—when needed and appropriate.
- Offering harm reduction and recovery-oriented services beyond those focused only on abstinence.

Asian and Native Hawaiian and Other Pacific Islander Populations

In 2019, an estimated 1.1 percent (about 174,000) of U.S. Asians and 2.8 percent (about 31,000) of Native Hawaiians and Other Pacific Islanders (NHOPI) age 12 and older engaged in past-year cocaine use; far fewer—0.1 percent of Asians (about 19,000) and 1.5 percent of NHOPI (about



16,000)—reported past-year MA use (CBHSQ, 2020a). An estimated 1.0 percent (about 159,000) of Asians and 0.8 percent (about 9,000) of NHOPI age 12 and older engaged in past-year prescription stimulant misuse (CBHSQ, 2020a).

Past-month use of cocaine in Asians and NHOPI ages 18 to 25 fell markedly from 2016 (about 33,000) to 2017 (about 1,000) and then rebounded in 2018 and 2019 (to about 25,000 and 21,000, respectively). In Asians and NHOPI age 26 and older, past-month cocaine use decreased between 2017 and 2019, down to about 52,000 in 2019 (SAMHSA, 2020d).

Regarding past-year MA use, a significant drop occurred from 2016 to 2017 (about 9,000 to less than 500) in the 18-to-25 age group, with rates stabilizing in 2018 and 2019 to around 9,000 and 8,000, respectively (SAMHSA, 2020d). Asians and NHOPI age 26 and older reported less past-year MA use in 2019 (about 26,000) than in 2018 (about 35,000 [SAMHSA, 2020d]).

Past-year prescription stimulant misuse by Asians and NHOPI ages 18 to 25 increased from about 81,000 in 2017 to 137,000 in 2018 and then dropped back down to 87,000 in 2019 (SAMHSA, 2020d). For individuals age 26 and older, rates have been fairly consistent, staying somewhere between 60,000 and 101,000 from 2016 to 2019 (SAMHSA, 2020d).

Although the prevalence of substance use in general is low among Asians and NHOPI collectively, the annual SUD treatment admission rate of this group grew more than those of non-Asian and non-NHOPI populations from 2000 to 2012 (Sahker et al., 2017). But for MA use specifically, treatment admissions in this population increased by only 12 percent during this time, and rates for cocaine use treatment actually decreased by almost 51 percent (Sahker et al., 2017). Additionally, in 2019, only 7 percent of Asians/NHOPI age 12 and older with any past-year SUD received treatment (CBHSQ, 2020a). Notably, a study found that Asians and NHOPI who use MA were less likely to complete treatment compared with Whites who use MA (Godinet et al., 2020). Collectively, these data suggest that greater efforts

are needed to address SUD treatment access, engagement, retention, and completion in Asian and NHOPI populations—especially among those with MA or cocaine use disorders.

ASIAN AND NHOPI POPULATIONS AND STIMULANT USE DISORDER STATISTICS

It is important to recognize the diversity of Asian and NHOPI populations when considering the prevalence of stimulant use disorders. This is in part because the percentage of people in the United States who identify as Asian American (5.7%) is much larger than the percentage who identify as NHOPI (0.2%; U.S. Census Bureau, n.d.). Grouping Asian and NHOPI populations together can lead to interpretations of data that obscure the needs of NHOPI and underrepresent the impact of stimulant use and prescription stimulant misuse on NHOPI individuals.

Asians are sometimes considered “model minorities,” referring to the false belief that a minority group largely possesses only positive qualities. This stereotype contributes to a misperception that Asians do not engage in substance use (Kim, 2021; Sahker et al., 2017). Consequently, individuals who are aware of this misperception—and feel pressure not to defy it—may hesitate to seek SUD treatment when needed. Also, clinicians may be less likely to look for substance problems in this population (Sahker et al., 2017).

Other possible treatment barriers include (Masson et al., 2013):

- Worry that SUD care will not be culturally tailored or linguistically appropriate.
- Fear of stigma and losing face (in Asian and NHOPI cultures, one’s social standing, reputation, dignity, and honor) if people—especially family members—find out help was sought from “outside” rather than from within the family.

- A lack of support (emotional, financial, or tangible) from family members who may not believe that treatment is necessary and may even be using substances themselves.

Additionally, Asians and NHOPI comprise numerous subgroups (e.g., Chinese, Japanese, Indian, Vietnamese, Hmong, Samoan) that have different attitudes toward and beliefs about substance use and treatment seeking (SAMHSA, 2014). Further, across these subgroups, individuals differ on level of acculturation and immigration status—two factors that have been linked to the presence of SUDs and their type. For example, higher degrees of acculturation have been linked to a greater risk of drug use disorders than have lower degrees of acculturation (Salas-Wright et al., 2015). Understanding these differences between and within subgroups can help clinicians better understand individual patients' feelings and beliefs about substance use and SUD treatment. For more information, see SAMHSA's TIP 59 (<https://store.samhsa.gov/product/TIP-59-Improving-Cultural-Competence/SMA15-4849>).

The following strategies may further help Asian and NHOPI patients with stimulant use disorders initiate, participate in, and complete treatment (SAMHSA, 2014):

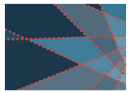
- Culturally adapted SUD care (e.g., clinicians discuss presenting issues using patients' culturally based explanations of them, rather than imposing views that could negatively affect patients' attitudes toward treatment) and, where available, services in patients' preferred language might help patients feel more understood by the clinician.
- Shame can be a treatment barrier for Asian and NHOPI populations, so establishing warm and supportive clinician–patient relationships can help reduce feelings of embarrassment and encourage acceptance of treatment.
- During the initial session, clinicians can help build patient confidence in their expertise by using their title, displaying diplomas and training certificates, and discussing their experience working with other patients with stimulant use disorders.

Clinicians working with Asian and NHOPI women with MA use should be especially mindful of screening for and addressing co-occurring disorders (CODs) as well as providing services or referrals to help with relationship issues and vocational challenges. This suggestion is based on a comparison of Asian/Pacific Islander men and women in treatment for SUDs (Han et al., 2016) in which MA was the primary drug for more than half of the women in the study. Women in the study were more likely than male participants to report significant family/social relationship problems, employment difficulties, and mental health issues.

American Indian and Alaska Native Populations

An estimated 6.9 million people identify as American Indian or Alaska Native (AI/AN), and 1.6 million AI/ANs are younger than age 18 (U.S. Government Accountability Office, n.d.). AI/ANs have the highest rates of SUDs of any U.S. racial/ethnic minority population, with 10.2 percent of AI/ANs age 18 and older meeting criteria for an SUD (CBHSQ, 2020a).

Recent NSDUH data show a decline in cocaine and MA use among AI/AN adults and a slight increase in prescription stimulant misuse among AI/AN adolescents and young adults (CBHSQ, 2020a). The rate of past-year MA and cocaine use in people age 12 and older (1.9% and 1.4%, respectively) remains high compared with other racial and ethnic groups (Baldwin et al., 2020; CBHSQ, 2020a; SAMHSA, 2018a). MA is the most prevalent drug seized from AI/AN communities, primarily owing to easy access and low prices associated with abundant distribution from large, well-organized drug trafficking organizations located in nearby border towns (*To Protect and Serve*, 2019). In a study examining prescription stimulant misuse in adolescent American Indians, nearly 7 percent of the sample had been prescribed stimulants and nearly 6 percent of the sample reported misusing stimulants to get high (Spillane et al., 2017).



Awareness of the following considerations can assist clinicians in providing culturally responsive care for AI/ANs with stimulant use disorders:

- Most AI/ANs believe that historical trauma, including the loss of culture, lies at the heart of SUDs within their communities (SAMHSA, 2018a).
- Because of the diversity among AI/AN cultures, clinicians with AI/AN patients should consult with professionals who are experienced in working with members of the specific tribes to which patients belong (SAMHSA, 2014).
- Use of substances often begins at a younger age than it does in other major racial/ethnic groups (R. A. Brown et al., 2016; SAMHSA, 2018a).
- Two-spirit individuals reported higher rates of illicit drug use, alcohol use, and mental health service use than their cisgender counterparts (“cisgender” refers to people who identify with the gender that matches their birth sex) in a small study conducted among urban AI/ANs (Balsam et al., 2004). “Two-spirit” is a pan-Indian term referring to AI/AN people combining activities of both men and women with traits unique to their status as two-spirit people, and who, in most tribes, were traditionally regarded as an alternative gender (Indian Health Service, n.d.). Among AI/AN people, the term can also be used to describe sexual orientation.
- Increased rates of suicidal ideation and suicide attempts have also been reported in a study evaluating the impact of boarding school attendance on mental health issues and substance use among urban two-spirit individuals (Evans-Campbell et al., 2012).
- There are multiple barriers to accessing SUD care in the AI/AN community, some of which include physical distance from service providers, concerns about maintaining anonymity, shame and prejudice, lack of childcare and transportation, a limited number of culturally competent AI/AN providers, and mistrust of government-funded social services (SAMHSA, 2018a). A full list is available in SAMHSA’s TIP 61, *Behavioral Health Services for American Indians and Alaska Natives* (<https://store.samhsa.gov/product/TIP-61-Behavioral-Health-Services-For-American-Indians-and-Alaska-Natives/SMA18-5070>).
- AI/AN communities experience higher rates of trauma compared with other racial groups, especially among AI/AN women. Trauma exposure (including violent crime, intimate partner violence, child abuse, violence against two-spirit individuals, and injuries) increases the risk for substance use (Baldwin et al., 2020; Ehlers et al., 2013; SAMHSA, 2018a).
- Resiliency factors in AI/AN communities are rooted in cultural traditions, family support, and cultural pride (LaFromboise et al., 2006).
- Practice-based approaches (knowing what works through experience, clinical judgment, cultural knowledge, and patient feedback) are much better accepted in AI/AN communities than evidence-based practices are (SAMHSA, 2018a).

Clinicians should also be mindful of patterns of urbanization among some AI/AN populations—especially patterns of forced migration into urban areas due to factors like land dispossession and natural disasters—and how this relocation might affect their patients. Some AI/AN populations living in urban areas—especially youth—may experience a weaker cultural identity, less cultural involvement, and more acculturative stress than AI/AN populations living on reservations or in rural AI/AN communities. These experiences could negatively affect their mental health and substance use behaviors (R. A. Brown et al., 2016). Some AI/AN patients living in urban areas face unique challenges related to SUD care, such as limited access to Indian Health Service care and culturally appropriate SUD treatments (Tonigan et al., 2020; Whitesell et al., 2012).

A national survey of urban and rural SUD treatment programs that provide services to AI/AN populations (Rieckmann et al., 2016) found that rural programs had a higher mean number of years of staff experience, were more likely to offer open mutual-help recovery groups (e.g., Alcoholics Anonymous), and were less likely to have traditional healers and ceremonial providers among their staff, but were more likely to have elders working in their program.

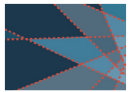
Although clinicians should strive for cultural understanding, nontribal clinicians should not practice traditional healing when treating AI/AN patients of a given tribe. Rather, clinicians “should rely on the community and native tribal council (governance) to guide the selection of traditional practitioners and the integration of traditional healing practices across the continuum of care” (SAMHSA, 2018a, p. 8). Clinicians should first ask AI/AN patients about their desire to incorporate cultural beliefs and practices into their treatment, as some may not have an interest in doing this (SAMHSA, 2014, 2018a).

Examples of cultural responsiveness in practice include:

- Addressing barriers to SUD care. Clinicians conduct needs assessments to identify and tailor services based on community strengths and resources, provide one-stop services, offer “warm-handoffs” to bridge referral gaps, develop outreach and community events that incorporate education and promote engagement, utilize telehealth services, and form partnerships between states and tribes (Baldwin et al., 2020; SAMHSA, 2018a).
- Recognizing AI/AN communication styles, such as the use of (1) nonverbal messages to convey respect or displeasure, (2) humor to ease psychological pain or discomfort with difficult topics, (3) indirect communication to avoid criticism of others and the appearance of being disloyal or disrespectful, and (4) stories to deliver personal messages (SAMHSA, 2009). Clinicians can enhance communication by listening and respecting silence, adjusting eye contact, asking questions about nonverbal cues, anticipating laughter, determining and valuing linguistic preferences and abilities, and using hopeful language and avoiding labeling (SAMHSA, 2018a).
- Addressing harmful narratives that result from historical trauma by offering AI/ANs the chance to explore the role of culture, history (including historical trauma), acculturation, discrimination, and bias in their stimulant use (SAMHSA, 2018a).
- Integrating holistic approaches that focus on mind, body, spirit, and context, particularly during the transition from adolescence to adulthood (Friesen et al., 2015).
- Including AI/AN communities in research and program design, development, implementation, and dissemination to ensure that AI/AN-specific issues are adequately represented in culturally sensitive interventions and prevention programs (Baldwin et al., 2009).

Clinicians may find using a traditional, Western approach to SUD treatment is too individualistic and lacks a focus on concepts like belongingness and a sense of community identity, which tend to be highly valued in AI/AN populations (Walsh-Buhi, 2017). Western treatment approaches may also fail to contextualize SUDs in this population in terms of their culture’s unique history, the presence of historical trauma, ongoing poverty and its effects, and the collective trauma experienced by this population as a whole (Walsh-Buhi, 2017). Neglecting these important contextual factors may make SUD treatment less effective for certain AI/AN patients (Walsh-Buhi, 2017).

For more information on culturally responsive SUD care for AI/AN patients and a list of culturally adapted SUD treatment approaches, see TIP 61, *Behavioral Health Services for American Indians and Alaska Natives* (<https://store.samhsa.gov/product/TIP-61-Behavioral-Health-Services-For-American-Indians-and-Alaska-Natives/SMA18-5070>). See also the resources available through the SAMHSA-funded National American Indian & Alaska Native Addiction Technology Transfer Center (<https://attcnetwork.org/centers/national-american-indian-and-alaska-native-attc/home>).



THE IMPORTANCE OF THINKING ABOUT SOCIAL DETERMINANTS OF HEALTH

Health is much more than just one's physical condition. To truly understand why a patient is struggling with a physical or behavioral health problem, such as a stimulant use disorder, a clinician needs to consider the full picture of social and environmental factors that contribute to the formation and persistence of health issues.

Social determinants of health (SDoH) have been defined as “the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks” (Healthy People 2030, n.d.), including risk for substance misuse and related health consequences (Office of the Surgeon General, 2016).

Common examples of SDoH include (Andermann, 2016; Healthy People 2030, n.d.):

- Poverty or income insecurity.
- Homelessness or housing instability.
- Food insecurity.
- Racism and discrimination.
- A history of childhood physical, sexual, or emotional abuse.
- Joblessness.
- The air and water quality in one's living environment.
- The safety and stability of one's neighborhood.
- Access to healthcare and behavioral health services.
- Access to education.
- Access to nutritious food.
- Access to transportation.

SDoH have been implicated in SUD formation and treatment access and completion (Sanner & Greene, 2020). For instance, an analysis of data from the 2012 NSDUH found the presence of several SDoH significantly increased an adult's odds of having lifetime MA use, including (King et al., 2019):

- Having a family income of less than \$20,000/year.
- Not having had a job in the previous 12 months.
- Having participated in a government assistance program in the previous 12 months.
- Having a high school education or less.

Clinicians need to ask patients about—and identify—possible SDoH that could be playing a role in their substance use. Not doing so could make it difficult—or even impossible—to get some patients to enter and remain in recovery. And patients' answers can reveal the need for “social prescribing” (Andermann, 2016)—that is, linking the patient to social services or referrals for any SDoH in the patient's life that are amenable to change (e.g., referring the patient to vocational rehabilitation, coordinating care with a social worker who can help enroll the patient in federal food or housing assistance programs).

Some SDoH—like poor air and water quality, racism and discrimination, and neighborhood crime—are not easily modifiable by a clinician or any patient affected by them. But simply understanding that such factors are present in a patient's life can help a clinician adopt a more empathic and nonjudgmental approach to SUD care.

Other strategies for clinicians include (Andermann, 2016):

- Developing cultural responsiveness as a critical pathway to learning how to identify and talk with patients about SDoH, particularly factors like racism, stigma, discrimination, immigration and acculturation, and inequities.
- Taking a person-centered, trauma-informed approach to SUD care. This includes not just learning how to ask patients about sensitive topics like abuse, violence, and other trauma but also about deeply personal topics like job or housing loss, immigration concerns, or literacy difficulties.
- Considering how to make treatment more accessible for all patients (e.g., offering evening hours, providing bus vouchers for patients relying on public transportation).
- Becoming advocates at the community, state, or national level to help enact social change, promote healthier communities, and support health equity.

For more information about SDoH and screening tools that can be used for assessment of SDoH, see the Rural Health Information Hub's Social Determinants of Health in Rural Communities Toolkit (<https://www.ruralhealthinfo.org/toolkits/sdoh>).

Women (Including Those Who Are Pregnant)

Treating stimulant use disorders in women can be significantly more complicated than treating stimulant use disorders in men because of the complex social structures and biases that women experience in their daily lives. Roles associated with motherhood, such as childcare, pregnancy, breastfeeding, and care of elder family members, may increase the familial responsibilities of women with SUDs. Power structures that are patriarchal in nature may complicate a woman's road to recovery through intimate partner violence, assault, and socioeconomic disenfranchisement. Additionally, data suggest that sexual minority women experience increased rates of stimulant use compared with their heteronormative counterparts (Philbin et al., 2020).

In a study examining co-occurring SUDs and posttraumatic stress disorder (PTSD), women who used cocaine only or in combination with cannabis had increased rates of repeated traumatic exposures, including arrests, incarceration, and adult sexual assault compared with women who used cannabis only (Ruglass et al., 2017). Additionally, cocaine use among women is related to increased stress associated with family obligations for which they do not receive additional help (Preston et al., 2018). The risk for suicide among women veterans with cocaine use disorder is significantly higher than for men veterans, indicating the presence of CODs and further complicating treatment considerations (Bohnert et al., 2017).

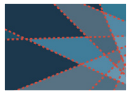
Although men and women use MA at similar rates, women often begin using MA at an earlier age and develop dependence more quickly than men (E. E. Hartwell et al., 2016). Additionally, women are more likely to obtain MA from a significant other and to use MA to assist with weight loss and enhanced energy (E. E. Hartwell et al., 2016). Women with MA use disorder have more psychiatric comorbidities (e.g., depression and anxiety), but tend to have longer treatment retention and better treatment outcomes (E. E. Hartwell et al., 2016).

There are several indirect entry points into the SUD treatment system for women, including:

- Pediatricians (mothers may take children to the doctor even when they do not go themselves).
- Child protective services.
- OB/GYN providers.
- Social service agencies.
- Primary care providers.
- Criminal justice agencies.

Barriers to effective evidence-based treatment are multifactorial for women. Access to care is a major barrier, particularly for women in rural settings. Among parenting women with SUD, women in rural settings had 90-percent lower odds of receiving treatment compared with urban women (Ali et al., 2020). Another study that considered women experiencing homelessness who were seeking services for their SUD found that a significant portion were highly motivated for treatment, but physical and transportation barriers remained an issue in accessing care (Upshur et al., 2018). Additionally, these women identified feeling depressed as the primary barrier to seeking services. Given that women in treatment for stimulant use disorders have a higher risk for PTSD (Saunders et al., 2015), it is important to consider the role this comorbidity may play in decreasing engagement in care for women. Women who had been arrested in the last year were 3 times as likely to receive treatment for their SUD as were women who had not (Martin et al., 2020).

Another barrier to effective care for women with a stimulant use disorder is the effect of self-stigma and previous traumatic medical experiences related to their SUD. Particularly among pregnant or parenting women, self-stigma related to their ability to parent or care for their children may cause them to avoid treatment situations that worsen feelings of shame or guilt (Cockroft et al., 2019; Frazer et al., 2019). SUD care should focus on engaging women and creating a safe and strengths-based treatment program to avoid further stigmatization of a vulnerable population.



The five core components of gender-responsive care are:

1. Addressing women's unique experiences.
2. Using a trauma-informed approach.
3. Using relational approaches.
4. Addressing women's needs in a comprehensive manner.
5. Providing a healing environment.

Treatment for women should use a holistic, gender-responsive approach. Topics could include:

- Relationships with family (after addressing social functioning, issues of homelessness/unstable housing, social isolation).
- Treatment needs of children.
- Intimate partner violence.
- Parenting.
- Life skills.
- Education and vocational training.
- Economic self-sufficiency.
- Reproductive health issues.
- Education about long-term effects of using stimulants.
- Mental health.
- Self-esteem.
- Independent living skills.
- Nutrition.
- Transportation.
- Ethnic and cultural issues.
- Day care and group counseling for children.

Transactional/survival sex (sex offered in exchange for tangible goods or services, like money, drugs, food, or shelter) is not a phenomenon exclusive to women who use stimulants; it is a concept that providers need to understand and discuss with their patients. More than 40 percent of women with a cocaine use disorder who were in outpatient SUD treatment have engaged in transactional sex; more than 10 percent continue engaging in these behaviors even in the setting of abstinence from cocaine (Rash et al., 2016).

Clinicians should address the specific needs of women who engage in—or who have previously engaged in—transactional/survival sex using

a trauma-informed approach to develop care plans. For women who continue to engage in transactional sex work, developing safety plans, avoiding cues and triggers related to substance use, and promoting health and reproductive autonomy may increase engagement and improve outcomes (Ditmore, 2013).

Pregnant Women and Their Children

National estimates of stimulant use among women of reproductive age show high rates of prescription stimulant misuse (617,000), followed by cocaine (540,000) and MA (317,000; CBHSQ, 2020a). The rate of stimulant use in the general population continues to rise and is mirrored in the rate of use among pregnant women (Smid et al., 2019).

The prevalence of cocaine use during pregnancy has been difficult to quantify but is estimated at 1.1 percent at any point in pregnancy (Bhuvanewar et al., 2008; Forray & Foster, 2015), with up to 750,000 exposed pregnancies and births each year (Cain et al., 2013). Results from the 2019 NSDUH showed that 0.2 percent of pregnant women reported past-month cocaine use (CBHSQ, 2020a). Cocaine use is a major cause of antepartum hospitalizations related to substance use among pregnant women (Smid et al., 2019).

Data on the prevalence of MA use in pregnancy also are limited, although national estimates range from 0.7 to 5.2 percent (Forray & Foster, 2015), and rates continue to rise, primarily in rural areas of the South, Midwest, and West. In a national sample of hospital deliveries occurring between 2004 and 2015, approximately 82,000 deliveries were affected by maternal amphetamine use, reaching a peak of 2.4 per 1,000 amphetamine-related hospital deliveries between 2014 and 2015 (Admon et al., 2019). Stimulant use during pregnancy is underreported and selective screening based on race or socioeconomic status may miss patients and children that could benefit from more tailored interventions (Martin et al., 2020; Smid et al., 2019). The prevalence of prescription stimulant misuse during pregnancy is not fully known. In 2019, NSDUH data showed that between 1 and 5.2 percent of reproductive-age women reported misuse of prescription stimulants (1.4% of women

ages 12 to 17, 5.2% of women ages 18 to 25, and 1 percent of women age 26 and older; CBHSQ, 2020a).

Effects on Pregnant Women

Stimulant use during pregnancy is associated with numerous harmful physical and psychological outcomes. Cocaine is toxic to multiple organ systems and can cause high blood pressure, heart attack, kidney failure, rupture of the liver, reduced blood flow to the heart and brain, strokes, seizures, and death (National Institute on Drug Abuse [NIDA], 2016b; Smid et al., 2019). As a result, cocaine toxicity can mimic preeclampsia (Cain et al., 2013). Cocaine use during pregnancy has a well-documented association with placental abruption (premature detachment of the placenta from the uterus) and preterm birth (Elkafrawi et al., 2020). Further, cocaine interacts with hormonal changes (e.g., increased progesterone) during pregnancy, which can worsen cardiovascular toxicity (Smid et al., 2019). Infection transmission is another risk of prenatal cocaine use, as women can transmit HIV, hepatitis, and syphilis to their fetuses. Women who misuse prescription stimulants during pregnancy can experience similar detrimental health effects, including high blood pressure, placental abruption, premature delivery, and postpartum hemorrhage (Worley, 2014).

MA has similar physiologic effects on pregnant women and is strongly associated with poor oral health and increased risk for infectious diseases, such as hepatitis and HIV (Smid et al., 2019). Studies have shown increased risk for miscarriage, stillbirth, placental abruption, and uterine rupture due to MA use. Stimulant use during pregnancy also has psychological consequences. A longitudinal study examining physical and psychological outcomes of prenatal cocaine use found poorer perceptions of mental health, higher rates of PTSD, and higher rates of other substance use among pregnant women with cocaine use compared with pregnant women without such use (Minnes et al., 2012). The study also demonstrated that prenatal cocaine use strongly predicts perceived psychological distress up to 10 years postpartum (Minnes et al., 2012). Similarly, pregnant women who misuse prescription drugs including stimulants have an increased risk

for psychosocial consequences, including poor judgment, impaired decision making, violence victimization, inadequate housing, involvement with the legal system, poor engagement in prenatal care, and co-occurring mental disorders (Worley, 2014).

Perinatal, Neonatal, and Developmental Effects

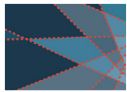
Cocaine can cross the blood–brain barrier and the placenta. Prenatal cocaine use increases the risk for (Dos Santos et al., 2018; Gouin et al., 2011; Smid et al., 2019):

- Placental abruption.
- Premature delivery.
- Low birth weight.
- Small-for-gestational-age infants.
- Earlier gestational age at delivery.
- Fetal growth restriction.

Although studies documenting long-term outcomes of fetal cocaine exposure are limited, there is evidence showing effects on children that include problems with behavior (e.g., difficulties with self-regulation), growth, inhibitory control, attention, and information processing (NIDA, 2016b; Smid et al., 2019). Cocaine can be passed to an infant through breastmilk; thus, breastfeeding is another source of exposure.

MA use during pregnancy also has detrimental effects on fetuses, such as earlier gestational age at delivery, lower birth weight, and smaller head circumference (Smid et al., 2019). After birth, infants who were exposed to MA in utero can experience withdrawal symptoms, such as jitteriness, drowsiness, and respiratory distress (Smid et al., 2019). Neurotoxicity is much higher with prenatal MA use than prenatal cocaine use (Dinger et al., 2017), leading to a range of long-term neurodevelopmental problems in childhood. Prenatal exposure to MA is associated with (Dinger et al., 2017; Smid et al., 2019):

- Aggression.
- Anxiety.
- Depression.
- Poorer motor performance.



- Lower IQ scores.
- Increased likelihood of cognitive problems affecting academic achievement.
- More problems with peers.

Less is known about misuse of prescription stimulants among pregnant women. However, studies of pregnant women taking prescription stimulant medications for attention deficit hyperactivity disorder (ADHD) have shown small increased risks for preeclampsia, premature delivery, and placental abruption (Smid et al., 2019).

Pregnant women should be screened for substance use, including stimulant use. Screening approaches can include brief self-report tools, brief intervention and referral to treatment screening methods, and urinalysis, following consent and appropriate counseling (American College of Obstetricians and Gynecologists [ACOG] Committee on Health Care for Underserved Women, 2011). Clinicians should be aware that many pregnant women are reluctant to admit or disclose stimulant use out of fear of losing custody of their children (A. O'Connor et al., 2021), highlighting the need for showing empathy and building rapport. Additionally, clinicians should expect to encounter women with diagnosed ADHD that may or may not be treated and women with undiagnosed ADHD (Marraccini et al., 2017).

Pregnant women who use stimulants require comprehensive prenatal care that is gender responsive and tailored to their needs (Chin & Bartholomew, 2020). This care should include nutritional assessment, testing for sexually transmitted infections and HIV, and access to social support services (ACOG, 2011). Given that stimulant use during pregnancy can impair fetal growth and increase the risk for pregnancy loss, pregnant women who use stimulants should have frequent ultrasounds and monitoring of fetal health throughout pregnancy, as clinically indicated (ACOG, 2011). Clinicians should ensure that these patients have established care with an OB/GYN and are connected to the appropriate ancillary services.

Patients taking prescription stimulants for ADHD should discuss with their healthcare providers the risks and benefits of using these medications while pregnant. Continued use of prescription stimulants

may be warranted in patients with severe ADHD symptoms that interfere with daily functioning (Marraccini et al., 2017). However, patients with milder forms of ADHD that do not significantly affect daily functioning may wish to discontinue their prescription stimulants while pregnant and engage in psychosocial treatments, such as cognitive-behavioral therapy (CBT).

ACOG (2011) recommends that pregnant women who are unable to stop using MA or other stimulants seek SUD care. Given the importance of SUD treatment in the context of pregnancy, pregnant women should voluntarily seek care at a residential treatment center whenever possible. If residential treatment is not possible, outpatient therapy sessions should be frequent for at least 90 days after treatment initiation. Treatment interventions should include:

- Patient and family education about the dangers of stimulant use to both mother and fetus.
- Motivational interviewing to assess readiness for change.
- Contingency management (CM) with tangible incentives to encourage treatment initiation and retention and reduced stimulant use.
- CBT, used in the Matrix model and trauma-focused therapy.
- Mutual-help support.
- Drug testing to monitor drug use and treatment progress.

Stressors and psychological distress during the postpartum period may increase the risk for relapse, necessitating close follow-up and support after delivery (ACOG, 2011; Smid et al., 2019).

Clinicians should also help connect pregnant women with stimulant use disorders to peer recovery support specialists, where available. Peer recovery support specialists are individuals with a lived experience of SUD recovery who are specially trained, supervised, and often certified to provide nonprofessional, nonclinical supportive services for other people with SUDs. The lived experience aspect is a critical piece of what helps make peer recovery support specialists effective in their work, as this experience conveys to patients a deep sense of understanding and empathy. Use of peer recovery support specialists has been linked to

many positive outcomes in SUD recovery, including increased abstinence, reduced substance use, better SUD treatment adherence and completion, and improved engagement in long-term recovery support, like mutual-help services and continuing care participation (Fallin-Bennett et al., 2020).

Little research to date has focused on the use of peer services for pregnant women in recovery from SUDs. However, existing evidence suggests peer recovery support specialists likely can offer pregnant women with SUDs a sense of trust, support, understanding, and connectedness (Fallin-Bennett et al., 2020; Paterno et al., 2018) that might help them later access and stay in recovery.

For additional information on substance use issues in women's health and pregnancy, see these SAMHSA publications: TIP 51, *Substance Abuse Treatment: Addressing the Specific Needs of Women* (<https://store.samhsa.gov/product/TIP-51-Substance-Abuse-Treatment-Addressing-the-Specific-Needs-of-Women/SMA15-4426>); *Guidance Document for Supporting Women in Co-ed Settings* (<https://www.samhsa.gov/resource/ebp/guidance-document-supporting-women-co-ed-settings>); *Clinical Guidance for Treating Pregnant and Parenting Women With Opioid Use Disorder and Their Infants* (<https://store.samhsa.gov/product/Clinical-Guidance-for-Treating-Pregnant-and-Parenting-Women-With-Opioid-Use-Disorder-and-Their-Infants/SMA18-5054>); and *Preventing the Use of Marijuana: Focus on Women and Pregnancy* (<https://www.samhsa.gov/resource/ebp/preventing-use-marijuana-focus-women-pregnancy>).

Men Who Have Sex With Men

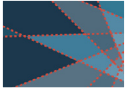
Nationally representative data on MSM and their substance use patterns are not currently available. But based on individual studies, MSM may have a high rate of stimulant use. For instance, among MSM ages 16 to 20 surveyed from 2009 to 2013, 6.2 percent reported lifetime use of cocaine and 3.3 percent reported recent cocaine use, whereas 1.1 percent reported lifetime MA use and 0.7 reported recent MA use (Newcomb et al., 2014). Other researchers have estimated higher rates, particularly for MA use, which has ranged from about 21 to 27 percent in other studies of MSM (Anderson-Carpenter et al., 2019). Among a sample of 286 MSM who use MA, 31 percent

reported a co-occurring cocaine use disorder (Fletcher et al., 2018). Using NSDUH data, a 2021 study evaluating prescription drug misuse by sexual identity found that men who identified as gay or bisexual had higher rates of past-year prescription stimulant misuse (5.1% and 6.4%, respectively) compared with men who identified as heterosexual (2.3%; M. Diaz et al., 2021).

MSM with HIV may be especially at risk for stimulant use. In a study of 766 MSM with HIV, more than one-third (35%) reported having used cocaine, crack, crystal MA, amphetamine, and/or ecstasy in the previous 3 months, and of these, 40 percent reported using injection drugs (Teran et al., 2020).

MSM may be at an increased risk for intimate partner violence, self-stigma/internalized homophobia, and trauma—all of which may be associated with negative health consequences, like depression, and could increase their likelihood of using substances (Batchelder et al., 2017; Duncan et al., 2018; Lopez-Patton et al., 2016; Moody et al., 2018). Some MSM—such as those experiencing homelessness or unstable housing—may engage in transactional sex, which has been linked to an increased risk of substance use and HIV infection and transmission (especially with casual as opposed to regular partners [Bauermeister et al., 2017]). In a study of MSM with and without HIV, among those who reported transactional sex, 60 percent reported using MA and 13 percent cocaine (Javanbakht et al., 2019).

MSM are at an increased risk of HIV acquisition compared with the general population. In 2019, MSM made up 69 percent of new cases of HIV diagnosed in the United States (Department of Health and Human Services, 2021). Among the population of MSM, two factors affecting the risk of acquiring HIV are race and age. For example, from 2015 to 2019, MSM ages 25 to 34 accounted for the largest number of HIV diagnoses attributed to male-to-male sexual contact (Centers for Disease Control and Prevention [CDC], 2021a). In 2019, the percentage of HIV infections caused by male-to-male sexual contact was somewhat higher in Black/African American (82%) and Hispanic/Latino (87%) males compared to White males (73%; CDC, 2021a). Research has found that MSM who use stimulants are more likely to engage in



condomless sex or to engage in other behavior—like forceful penetration that can lead to condom breakage—that increases the risk of transmission or infection with HIV (Vu et al., 2015; Yu et al., 2015).

Sexual risk-taking often occurs under the influence of substances. Sexual risk-taking within the context of substance use is hypothesized to occur because of the disinhibitory effects of the drug, learned patterns (especially between stimulant use and certain high-risk sexual practices), low self-esteem, altered perception of risk, lack of assertiveness to negotiate safer practices, and perceived powerlessness (Bourne & Weatherburn, 2017; Ritchwood et al., 2015; Semple et al., 2011; Thompson & Auslander, 2011). Substance use can reinforce risky sexual behavior through enhancement of sexual pleasure (Bourne & Weatherburn, 2017; Ritchwood et al., 2015). Young MSM report misusing prescription stimulants to increase sexual desire (Kecojevic et al., 2015).

A wide range of factors, including sexual activities with an increased risk of HIV acquisition, likely contribute to the increased odds of HIV infection related to substance use among MSM (Edelman et al., 2016; Schneider et al., 2013). Other possible contributors to increased risks of HIV infection, especially among younger MSM, include (CDC, 2014):

- Misinformation about HIV prevention strategies and difficulty in accessing highly effective forms of prevention and treatment, particularly among racially and ethnically diverse MSM (Mayer et al., 2020; Ojikutu et al., 2018).
- Lack of widespread, effective education about HIV prevention and treatments among MSM.
- Missed opportunities for HIV testing to increase patients' knowledge of their HIV serostatus and help them appropriately access and engage in care.
- Lack of awareness among some MSM with HIV about their positive HIV status and about safe sexual practices to limit the spread of infection.
- Feelings of rejection and loneliness among some MSM who may experience marginalization, bullying, harassment, and estrangement from family or friends, sexual victimization, or the intersectionality of homophobia and racism (CDC, 2014).

There currently are no clear data on rates of SUD treatment seeking among MSM in the United States. An Internet survey conducted in 2008 found that only 3 percent of MSM surveyed had accessed drug or alcohol treatment in the past 60 days (Hirshfield et al., 2015). A 2017 literature review that analyzed findings from the United States, the United Kingdom, and Australia suggests that SUD treatment rates among MSM are likely much lower than they are among men who identify as heterosexual and do not engage in sex with other men (Bourne & Weatherburn, 2017).

One treatment study looking at stimulant use in MSM is Project IMPACT, an HIV risk reduction and behavioral activation counseling intervention for MSM without HIV who are currently using stimulants (Mimiaga et al., 2018). Study researchers hope to determine whether 10 weekly sessions of education for HIV risk reduction, CBT for substance use reduction, and behavioral activation to improve mood, reduce substance use, and enhance motivation to engage in HIV risk reduction behavior will result in fewer instances of condomless anal sex without the protection of preexposure prophylaxis (PrEP), relative to a control group. Findings from the study have not yet been published.

In the absence of data, it is difficult to know for certain the barriers that prevent more MSM who need SUD treatment from seeking it, and thus how clinicians and treatment facilities can help overcome these barriers. A lack of specialty SUD care for MSM may be a major deterrent, as clinicians not trained in working with this population may not understand the unique challenges facing some MSM and the sociocultural issues that may contribute to substance use among them (Bourne & Weatherburn, 2017).

SUD treatment clinics may find success in reaching, engaging, and retaining MSM patients by adapting strategies recommended for healthcare service delivery programs that address the specific needs of MSM. These strategies include offering (United Nations Population Fund [UNFPA], 2015):

- Flexible clinical hours and services (e.g., emergency medication pickups, walk-in services).

- Services that address specific adversities facing MSM (e.g., sexual assault, intimate partner violence, physical assault, abandonment).
- Referral to community-based and social services.
- Welcoming, nonhostile tone toward MSM and their needs (staff training is key).

The term “men who have sex with men” is an all-encompassing term to identify specific behaviors rather than label someone’s sexual orientation. Recently, with changes in stigma toward the lesbian, gay, bisexual, transgender, queer, and intersex+ community, many patients feel comfortable sharing their gender identity and sexual orientation with clinicians or the outside world. Still, stigma persists, and fears of marginalization and homophobia—particularly in the healthcare setting—contribute to whether patients wish to disclose or self-identify their sexual orientation. Patients may choose to keep this information confidential or request that the information not be shared in the medical record, as they fear what could happen if they were ever “found out.” This may be an indicator of a larger need to address self-stigma or previous trauma with the medical system.

Clinicians should understand that MSM may self-identify in different ways, and that this is a diverse population. Some MSM may consider themselves gay, and others may identify as heterosexual or bisexual (UNFPA, 2015). Yet other MSM may not be comfortable self-identifying in any particular way.

Stigma and fear of physical or emotional harm may keep some MSM from feeling comfortable discussing themselves and any struggles they may have encountered, which can be a challenge to getting them to enter SUD treatment (UNFPA, 2015). When clinicians can help MSM feel comfortable sharing information about their self-identity and sexual behaviors, it may have positive effects in terms of reducing their risk of HIV. Among MSM, disclosure of same-sex practices to healthcare providers has been associated with an increased likelihood of undergoing HIV testing (Qiao et al., 2018). Healthcare settings in which MSM are more likely to disclose include ones in which physicians are perceived to be younger in age and nonhostile toward the gay community

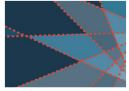
(Qiao et al., 2018). Specific barriers to disclosure include:

- Healthcare providers’ failure to ask patients directly about their sexual practices.
- Patients’ fear of their confidentiality being violated.
- Patients’ fear of stigma.

Internalized homophobia and self-stigma can perpetuate ongoing substance use. Patients who have always associated same-sex contact with shame and guilt may use substances to pacify those feelings so that they can engage in the activity. Strategies to help patients through self-acceptance, and remittance of internalized homophobia, particularly for those who are not “out,” may be an important aspect of helping patients achieve recovery and minimize drug-related problems (Moody et al., 2018).

PWID make up only a small portion of positive cases of HIV in the United States. In 2018, of the more than 37,000 people newly diagnosed with HIV in the United States, about 10 percent were PWID (CDC, 2021b). However, injection drug use is still concerning because it can increase risk of HIV transmission or can be associated with sexual behaviors that could make HIV transmission more likely. For instance, a study of MSM with HIV who use MA showed that negative attitudes about condoms and higher levels of MA use are associated with higher levels of unprotected anal sex (Nakamura et al., 2011). Conducting risk assessment, including analyzing patients’ use to see how sex fits into their use patterns, is critical for clinicians and outreach workers to do.

Clinicians should ask patients about their sexual activity and whether they are taking antiretroviral medication as PrEP. Research suggests that gay and bisexual men who indicate a willingness to adopt PrEP for HIV prevention may also be willing to engage in more risky sexual behavior, like decreasing or stopping condom use during anal sex (Brooks et al., 2012). However, among MSM specifically, the relationship between PrEP use and increased risky sexual activity is not clear and requires further study (Freeborn & Portillo, 2018). This underscores the importance of talking openly with patients about their use of PrEP



and subsequent sexual behaviors and ensuring that they understand that having risky sex while adopting PrEP could negate the HIV-prevention benefits of PrEP by exposing them to other

sexually transmitted infections. Patients should be both counseled on this risk and offered additional HIV risk reduction and prevention strategies (e.g., behavioral counseling, access to condoms).

CHEMSEX AND STIMULANT USE DISORDERS

Chemsex, also known as sexualized drug use, is a sexual encounter that is coupled with the use of mind-altering substances before or during intercourse to facilitate, enhance, prolong, and sustain the sexual experience (Giorgetti et al., 2017; S. Maxwell et al., 2019). In addition, using substances to reduce cognitive inhibition during sexual encounters can increase perceptions of confidence and emotional connection (S. Maxwell et al., 2019). Despite these expected benefits, some research has shown that this disinhibition can increase risk-taking behavior and negatively affect psychosocial functioning, especially when multiple substances are used (Closson et al., 2018; S. Maxwell et al., 2019).

Historically, cannabis, ecstasy, amphetamine, and cocaine were the substances most commonly used in chemsex; however, γ -hydroxybutyric acid (GHB) and congeners, mephedrone, MA, erectile dysfunction agents, alkyl nitrites, and ketamine have become increasingly used in sexual encounters (Giorgetti et al., 2017; S. Maxwell et al., 2019). Using substances during sexual encounters can occur in a variety of settings (e.g., saunas, sex-on-premises venues, private homes). Phone applications and online platforms have made it easier for individuals to locate and connect with others who engage in chemsex.

Among U.S.-based studies that have focused on chemsex and stimulant use, the prevalence of MA use ranged from 9 to 22 percent (S. Maxwell et al., 2019). International and U.S.-based studies have shown cocaine to be the least frequently used chemsex drug, with prevalence estimates ranging from 2 to 33 percent (S. Maxwell et al., 2019). Studies with large samples of MSM found that between 1 and 9 percent reported injection drug use, with MA being the most commonly injected substance (S. Maxwell et al., 2019).

Chemsex is well described among MSM (S. Maxwell et al., 2019). Research remains limited, and prevalence rates vary greatly by geographical location and culture (S. Maxwell et al., 2019). MSM who engage in chemsex are most likely to be White, identify as gay, and be between the ages of 32 and 42 (S. Maxwell et al., 2019).

The use of chemsex drugs during sex has been shown to increase engagement in high-risk sexual behaviors (e.g., condomless anal intercourse) in MSM, which, in turn, increases the risk of acquiring sexually transmitted infections and HIV (S. Maxwell et al., 2019). Studies examining the use of nPEP (nonoccupational postexposure prophylaxis) and PrEP among MSM who participate in chemsex remain extremely limited.

Clinicians who work with individuals using stimulants can assess for chemsex-related behaviors by asking the following screening questions:

- Have you ever thought about using substances when having sex?
- When was the last time you had sex while using substances?
- Have you ever felt guilty about what you have done under the influence when having sex?

Transgender and Gender Nonbinary Community

In the United States, approximately 0.3 percent of adults identify as transgender (Stroumsa, 2014). In a study of adults age 18 and older who self-identified themselves as within the gender spectrum or gender variant, 45.2 percent identified as neither male nor female, and 5.5 percent identified as both male and female (Kuper et al., 2012). Further, 72.3 percent of participants identified with more than one current gender identity (e.g., male, female, genderqueer, transgender, transsexual, crossdresser, two-spirit, bigender, intergender), with a reported average of 2.5 gender identities (Kuper et al., 2012).

Exhibit 6.1 includes key terms discussed in this chapter.

EXHIBIT 6.1. Key Terms

Cisgender: A term that refers to individuals who do not identify as transgender. These individuals' gender identities, expressions, and roles align with the sex assigned to them at birth and the culturally established categories of gender.

Transfeminine: Individuals who were assigned male at birth but identify with the feminine side of the gender spectrum or as nonbinary.

Transgender: An umbrella term for individuals whose gender identities, expressions, and roles occur on a continuum, often differ from the sex assigned to them at birth, and cut across culturally established categories of gender. Understanding of the transgender community continues to evolve. Therefore, some patients and health professionals may define “transgender” slightly differently.

Transmasculine: Individuals who were assigned female at birth, but who identify with the masculine side of the gender spectrum or as nonbinary.

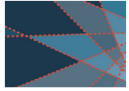
Sources: American Psychological Association (2015); Center for Substance Abuse Treatment (2012); Coleman et al. (2012); Human Rights Campaign (n.d.); Mayo Clinic (2017a); Scheim et al. (2017).

Most substance use research with the TGNB population has focused on alcohol use. Significantly fewer studies have assessed the prevalence of illicit drug use. Results from these studies show cocaine and amphetamine use is somewhat more common among transgender people than cisgender people, with past-year cocaine use among transgender people an estimated 6.8 percent higher and past-year amphetamine use an estimated 1.3 percent higher (Scheim et al., 2017). A study of SUD treatment programs in San Francisco, CA, demonstrates that transgender identity predicts MA and injection drug use in women (Flentje et al., 2014).

Benotsch and colleagues (2013) found that among transgender individuals who misused prescription drugs, 13.5 percent misused prescription stimulants. Prescription drug misuse has been shown to be more common among binary transgender men, nonbinary individuals assigned female at birth, and nonbinary individuals assigned male at birth compared with binary transgender women (Kidd et al., 2021).

Stimulant use patterns differ between transgender and cisgender populations. Past-year cocaine use is higher among transmasculine individuals, and past-year amphetamine use is higher among transfeminine individuals compared with use among cisgender men and women (Scheim et al., 2017).

Substance use, particularly injection drug use, among the TGNB population increases the risk for transmission of blood-borne diseases such as HIV and hepatitis. A large multinational study of HIV infection rates among transgender women in the United States, Europe, Latin America, and the Asia-Pacific region showed the odds of being infected with HIV are 49 times higher among transgender women compared with all adults of reproductive age, regardless of race, culture, or socioeconomic status (Baral et al., 2013). The high rate of HIV infection among transgender women is concerning, given the barriers that TGNB individuals face in accessing care.



Transgender individuals with any lifetime treatment for substance use tend to be older and transfeminine, access gender-affirming health care, and have lower income levels (despite higher education levels). Seeking treatment for recent substance use is associated with a history of mental illness-related risk factors (e.g., being a victim of intimate partner violence and experiencing PTSD and depression) and with engagement in mental health services (Keuroghlian et al., 2015). Additionally, treatment for recent substance use is associated with participating in sex work, having unstable housing, and experiencing discrimination related to public accommodations (Keuroghlian et al., 2015).

Several factors contribute to the development of SUDs and use of treatment services among TGNB people. People who identify as transgender have a higher risk for verbal, physical, and sexual victimization and frequently encounter interpersonal and structural discrimination (Keuroghlian et al., 2015). A national survey of transgender individuals found that 28 percent of individuals delayed medical care because of discrimination and barriers such as (J. M. Grant et al., 2011):

- Refusal of care (19%).
- Harassment in medical settings (28%).
- Violence in medical settings, including physical assault in a doctor's office (2%).
- A lack of provider knowledge about trans-affirmative care (50%).

Transgender individuals report using substances to cope with stigma and mistreatment (J. M. Grant et al., 2011), ultimately increasing the odds of alcohol, cannabis, or cocaine use by 3 to 4 times and, among transgender women, any drug use by 8 times (Nuttbrock et al., 2014). Co-occurring mental disorders (e.g., depression, PTSD) also can increase the risk for substance use and facilitate the underlying relationship between gender-related violence and substance use (Nuttbrock et al., 2014; Rowe et al., 2015).

Data from several studies from the 2000s suggest that approximately 50 percent of transgender individuals with SUDs do not seek treatment because of concerns about stigma (Matsuzaka, 2018). When

seeking inpatient SUD care, TGNB people encounter structural barriers, such as gender-segregated treatment facilities, institutional bias, and stigmatizing attitudes among providers (Matsuzaka, 2018).

Research on interventions for reducing problematic substance use in the transgender community remains scarce and has largely consisted of feasibility and acceptability studies conducted in the context of risky sexual behavior and HIV transmission (Glynn & van den Berg, 2017). But increased understanding of TGNB issues affecting general healthcare delivery has contributed to the American Psychological Association's formulation of TGNB-specific recommendations for mental health service and SUD care delivery.

In 2015, the American Psychological Association recognized ongoing advancements in TGNB-informed research and published practice guidelines to assist clinicians with providing culturally responsive, developmentally appropriate trans-affirmative care. When working with the TGNB population, clinicians should have foundational knowledge and awareness of the spectrum of gender diversity, cultural backgrounds, and life experiences (e.g., stigma, discrimination, violence victimization) of TGNB people to provide individualized, TGNB-specific health care (American Psychological Association, 2015). Clinicians should help TGNB patients by (American Psychological Association, 2015):

- Providing a safe environment to explore gender identity and expression, while recognizing their own attitudes and beliefs (e.g., asking for preferred pronouns, displaying TGNB-affirmative resources, adapting paperwork that includes demographic information).
- Learning about TGNB-specific topics that affect care.
- Acknowledging the existence of institutional barriers that can delay treatment engagement.
- Remaining nonjudgmental.
- Modeling acceptance.

Learn more about clinical considerations when treating TGNB patients with SUDs in SAMHSA's *A Provider's Introduction to Substance Abuse Treatment for Lesbian, Gay, Bisexual, and*

Transgender Individuals (<https://store.samhsa.gov/product/Providers-Introduction-Substance-Abuse-Treatment-Lesbian-Gay-Bisexual-Transgender/SMA12-4104>).

Adolescents

Substance use among adolescents is of critical concern because of its associations with their physical and social development. Hormonal surges during puberty, especially in testosterone, support risk-taking behaviors, which can be negative (e.g., underestimating the danger of drinking and driving) or positive (e.g., trying out for a sports team or a role in a play). Adolescent years are also a time of expansive cognitive development (e.g., emergence of abstract reasoning, robust memory) and increased focus and specialization (Silvers et al., 2019). In essence, the adolescent brain is laying down a network of cognitive pathways that will shape and guide future brain development and, thus, adult thinking and behavior.

Adolescence is a time of social maturation as well. Cultural expectations are that young adults emerge from adolescence with enhanced autonomy—ready to separate from their families, further their education or find employment, and begin to establish an independent existence. One aspect of this increased focus on the self can be, paradoxically, increased susceptibility to peer influences, for good and ill.

Because the brain is undergoing intense and rapid change during adolescence, it is particularly vulnerable to the effects of substance use. Substance use during adolescence is associated with abnormal brain development, including poor cognitive performance (Otten et al., 2019). Cocaine and MA use and amphetamine misuse during adolescence have been shown to rewire still-developing parts of the brain and alter the functioning of more mature parts (Salmanzadeh et al., 2020).

Many substance misuse prevention and treatment efforts are directed at teenagers because intervention during adolescence can help prevent SUDs in later life. One of the strongest associations with substance use before age 15 is the development of SUDs in later adolescence and adulthood (Otten et al., 2019). Early substance use

is also strongly associated with depression, suicidal ideation, and suicide attempts among adolescents (Marschall-Lévesque et al., 2017).

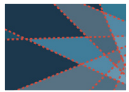
Despite the negative effects that adolescent substance use has on physical and mental health, most problems with substance use resolve without any treatment as people enter adulthood (Cousijn et al., 2018). When considering the vulnerability of adolescents to substance use, it is helpful to remember that they also show remarkable resilience. The same plasticity that makes their developing brains particularly susceptible to the ill effects of substance use also seems to equip adolescents to learn and adapt.

According to nationally representative data (CBHSQ, 2020a; University of Michigan, 2020):

- More than one in three students (34.7%) in 8th, 10th, or 12th grade have used an illicit drug, including cannabis. That figure climbs to almost one in two (46.6%) if surveying only 12th graders.
- Regarding cocaine use, 2.6 percent of 8th, 10th, and 12th graders surveyed had ever used cocaine (including crack cocaine); 1.4 percent had used cocaine in the previous year.
- Among people ages 12 to 17, an estimated 75,000 engaged in lifetime MA use.
- Among people ages 12 to 17, about 430,000 engaged in past-year prescription stimulant misuse.

Adolescent usage rates for cocaine, amphetamines, and MA have been dropping for two decades. In 1999, nearly 1 in 10 high school seniors had tried cocaine (9.8%), 1 in 6 had used amphetamines (16.3%), and 1 in 12 had used MA (8.2%; Johnston et al., 2020).

Despite declining use, stimulants warrant attention for at least two reasons. First, adolescents tend toward polysubstance use, estimated at 12 to 34 percent among this group depending on age and setting (Kecojevic et al., 2017). Per NSDUH 2019 data, people age 12 and older with past-year MA use are 4 times as likely to use cannabis, 2 times as likely to drink heavily, 9 times as likely to misuse prescription opioids, and 17 times as likely to use cocaine as those with no past-year MA use (CBHSQ, 2020a). Second, they tend to



use substances that are convenient to obtain; thus, rates of stimulant use are likely to be higher in areas with ample availability. Nationwide, when 12th graders were asked about availability of various stimulants, more than a quarter (28.4%) said it was fairly or very easy to obtain cocaine; availability of powder and crack cocaine was roughly equal (18.3% and 16.5%, respectively; University of Michigan, 2020).

Few adolescents who need treatment for stimulant use disorder receive it. According to 2019 NSDUH data, only 0.5 percent of adolescents receive treatment for any SUD (CBHSQ, 2020a). By some estimates, SUD treatment reaches less than 6 percent of the adolescents who need it (Silvers et al., 2019).

The advantages of identifying substance use problems in adolescents and intervening successfully are significant. Most people who develop an SUD will do so in adolescence or young adulthood (Saitz et al., 2021). Identifying adolescents who are using substances can help prevent those individuals from developing SUDs later in life. Drug and alcohol use are the primary preventable risks that contribute to some of the leading causes of death for adolescents—namely, accidents, homicide, and suicide.

The American Academy of Pediatrics' clinical report, Substance Use Screening, Brief Intervention, and Referral to Treatment (<https://pediatrics.aappublications.org/content/138/1/e20161211>) provides information about substance use screening and treatment for adolescents.

Adolescents may be inclined to use prescription stimulants in a nonprescribed way or use another person's prescription to try to improve cognitive and academic performance (Benson et al., 2015; Weyandt et al., 2016). Stressors including college entrance exams, school assignments, and familial pressure may make misusing prescription stimulants appealing. All adolescents should be screened for stimulant use disorder regardless of academic performance or other perceived achievements. Notably, there is no evidence that taking stimulants prescribed by a medical provider for the treatment of ADHD in adolescence leads to the development of SUDs in adulthood (Quinn et al., 2017; Wilens et al., 2011).

Risk-taking behaviors are not limited to substance use in adolescence. Increased sexual risk-taking behaviors can occur in adolescence more generally, especially when adolescents demonstrate high levels of sensation seeking and impulsive decision making (Charnigo et al., 2013). Clinicians caring for adolescent patients with stimulant use disorder should conduct a careful sexual health history to identify potential needs, including screening for sexually transmitted infections, PrEP/nPEP (nonoccupational postexposure prophylaxis) referral, or additional education about safe sex practices.

Evidence-based SUD treatment seems to be less effective for adolescents than for adults. This may be partly because many evidence-based treatment approaches are developed for and tested primarily on adult populations. A review of 29 studies of interventions to prevent adolescent substance use found that interventions that were successful in reducing or preventing illicit substance use were narrowly targeted (e.g., addressing only Asian American girls, eighth-grade girls in foster care, truant youth). Interventions that seemed to be more broadly successful were delivered in school settings and involved students' families. Familias Unidas consists of 12 family-based sessions designed to improve family communication, develop positive parenting, and enhance parental monitoring to reduce risky substance use among Hispanic adolescents (E. O'Connor et al., 2020). Brief interventions in a primary care setting were found to be relatively ineffective at preventing substance use in young adults (Saitz et al., 2021).

Adolescent substance use is often identified in a primary care setting, where healthcare personnel may lack the training or skills to provide developmentally appropriate, evidence-based interventions (Hadland et al., 2021). Referrals often place young people in treatment settings more appropriate for adults. Because the SUD treatment system often focuses on adults, it can be hard to know where to refer adolescents for screening and assessment. Given the associations between risk-taking and substance use, adolescents with substance use problems often become involved in the juvenile justice system. The gaps in the SUD continuum of care for adolescents may help explain the difficulties in treating this population.

NIDA'S PRINCIPLES OF ADOLESCENT SUD TREATMENT

A NIDA (2014b) research-based guide sets out these 13 principles of adolescent SUD treatment:

1. Adolescent substance use needs to be identified and addressed as soon as possible.
2. Adolescents can benefit from a drug abuse intervention even if they are not addicted to a drug.
3. Routine annual medical visits are an opportunity to ask adolescents about drug use.
4. Legal interventions and sanctions or family pressure may play an important role in getting adolescents to enter, stay in, and complete treatment.
5. SUD treatment should be tailored to the unique needs of the adolescent.
6. Treatment should address the needs of the whole person, rather than just focusing on his or her drug use.
7. Behavioral therapies are effective in addressing adolescent drug use.
8. Families and the community are important aspects of treatment.
9. Effectively treating SUDs in adolescents requires also identifying and treating any other mental health conditions they may have.
10. Sensitive issues such as violence and child abuse or risk of suicide should be identified and addressed.
11. It is important to monitor drug use during treatment.
12. Staying in treatment for an adequate period of time and continuity of care afterward are important.
13. Testing for sexually transmitted diseases (e.g., HIV; hepatitis B and C) is important in drug treatment.

For more on each principle, see NIDA's *Principles of Adolescent Substance Use Disorder Treatment: A Research-Based Guide* (<https://www.drugabuse.gov/publications/principles-adolescent-substance-use-disorder-treatment-research-based-guide/principles-adolescent-substance-use-disorder-treatment>).

Behavioral treatments such as CM, CBT, and treatment regimens that mix the two approaches (e.g., the Matrix model) remain the best evidence-based treatments for stimulant use disorder (NIDA, 2019e).

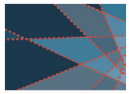
Because of their rapid cognitive development, adolescents are more adept than adults at incorporating new information and adapting their behavior to new social contexts (Davidow et al., 2016). This tendency supports the use of behavioral approaches and those that involve family members in treatment of adolescent SUDs (Silvers et al., 2019). Approaches that focus on parent training and family communication (e.g., Strengthening Families Program, Community Reinforcement and Family Training [CRAFT]) can enlist family members as a stabilizing influence on adolescents.

Peer-based SUD services may enhance other services such as screening, brief intervention, and referral to treatment (SBIRT) and help adolescents

with SUDs engage in treatment when other support services are not readily available in the community (Winn et al., 2019). Peer services may also be particularly important for engaging adolescents in mutual-help programs, like 12-Step groups (Nash, 2020). (A 2016 review of case series studies yielded promising, although not definitive, findings that active participation in mutual-help groups by adolescents with substance misuse increases the likelihood that they will achieve abstinence [Bekkering et al., 2016].)

Specifically, peer recovery support specialists can aid adolescents with SUDs by (Nash, 2020):

- Introducing them to sober activities.
- Helping orient them to the philosophies and benefits of 12-Step groups.
- Helping them resolve feelings of ambivalence or resistance to SUD treatment.
- Serving as positive role models of recovery.



People Experiencing Homelessness/Unstable Housing

Per the *2020 Annual Homeless Assessment Report to Congress*, approximately 580,000 Americans were homeless on any given night in 2020 (Department of Housing and Urban Development, 2021).

Some people experiencing homelessness or unstable housing also experience problems with stimulant use. Data from 12 SUD treatment programs in the National Drug Abuse Treatment Clinical Trials Network showed almost 32 percent of patients had unstable housing and nearly 6 percent were experiencing homelessness (Pan et al., 2020).

Compared with patients experiencing homelessness and those who were stably housed, patients with unstable housing had the highest prevalence of cocaine use (about 45%), opioid use (42%), and combination stimulant–opioid use (25%). In a primary care sample of people experiencing homelessness, 16 percent reported 3-month cocaine use (Stringfellow et al., 2016). The 2005–2015 Treatment Episode Data Sets show that, among people experiencing homelessness who entered SUD treatment, 13 percent reported cocaine as their primary substance and 8.5 percent reported MA (Famutimi & Thompson, 2018). People using injectable drugs and currently experiencing homelessness who were surveyed as part of the 2015 National HIV Behavioral Surveillance System had a high rate of injecting MA (almost 72%) or injecting both MA and heroin (77%) in the previous year (Al-Tayyib et al., 2017).

Adolescents and young adults who experience homelessness/unstable housing are also vulnerable to stimulant use. In a study of youth with a history of homelessness, nearly 22 percent reported using MA 20 times in the previous 30 days (Yoshioka-Maxwell et al., 2015). Additionally, a 2012–2013 survey of youth in California who were homeless revealed that nearly 11 percent misused prescription stimulants only, and about 21 percent misused both prescription stimulants and prescription sedatives (Rhoades et al., 2014).

The clinical picture of individuals who use stimulants and experience homelessness/unstable housing is difficult to characterize because of the diversity of challenges these individuals face. Such challenges can include one or more of the following (Cox et al., 2017; Nyamathi et al., 2012; Torchalla et al., 2011):

- Serious mental illness and other mental disorders
- Chronic health conditions
- A tendency toward injection drug use
- A history of trauma (e.g., being a victim of sexual violence)
- A history of emergency department visits
- An elevated risk of engaging in transactional/survival sex
- Elevated rates of infectious diseases, like HIV or hepatitis C virus (HCV)
- Elevated rates of polysubstance use (e.g., alcohol)

Clinicians should recognize that, in patients who are using MA or cocaine and engaging in transactional/survival sex, the stimulant use may allow them to engage in sex work that provides them with a source of income. Such patients may have ambivalence about abstaining from stimulants. Walls and Bell (2011) describe the use of transactional/survival sex as common among youth and young adults experiencing homelessness who also have SUDs, including stimulant use disorders (especially ones involving MA and crack cocaine). The association between transactional/survival sex and injection drug use is particularly strong.

Stimulant use can also serve a functional purpose when people are evicted from housing. Individuals who are newly homeless may initiate or return to MA use because they perceive this as helpful in coping with the demands and stressors of their situation (Damon et al., 2019). In qualitative interviews of women experiencing homelessness and using stimulants, some women reported that stimulant use helped them stay awake and alert to protect themselves from physical harm or theft (McKenna, 2013).

Rather than shaming or stigmatizing patients for engaging in functional stimulant use, clinicians should be empathetic and try to understand the extent to which people with homelessness/unstable housing sometimes engage in high-risk behaviors to protect themselves and survive.

When working with patients with stimulant use disorders who are homeless or housing insecure, clinicians should:

- Refer them to case managers who can help them navigate health and social support systems.
- Teach them harm reduction strategies (especially ones related to sex work and HIV prevention).
- Help connect them to available places to shower, use the toilet, and sleep.
- Link them with social services that can provide basic hygiene tools and health products—like soap, toothbrushes, toothpaste, condoms, and menstrual products—and, for patients who inject stimulants, soap and water or alcohol-based hand sanitizer or alcohol pads to cleanse the injection site and antibacterial ointment to heal injection sites.
- Consider using Housing First approaches to treatment initiation (Baxter et al., 2019). (For more information on Housing First, see <https://www.hudexchange.info/resource/3892/housing-first-in-permanent-supportive-housing-brief/>).

Given the unique challenges and complex issues facing people experiencing homelessness or unstable housing, such patients may benefit from referral to a peer recovery support specialist, if available. Peer support in this population has been associated with reduced drug and alcohol use and lower rates of return to substance use (Barker & Maguire, 2017). Other non-substance-related outcomes of value associated with peer support among people with homelessness/unstable housing include improvements in quality of life and in social support (e.g., increase in certain types of social support, decrease in loneliness), an increase in mental health functioning and a reduction in psychiatric symptoms, a decrease in number of days homeless and lower risk of returning to homelessness, a decrease in number of criminal arrests, and improvements in self-efficacy and self-esteem (Barker & Maguire, 2017).

Harm reduction and supportive services like these can be especially helpful for patients who have stimulant use that serves a functional purpose, because these individuals might be unwilling to abstain from cocaine or MA use.

For people who are interested in formal SUD treatment, CM (see Chapter 4 for more discussion) has demonstrated effectiveness in helping patients with homelessness/unstable housing and SUDs improve psychological and emotional distress, abstinence, and treatment retention (Fletcher et al., 2014; Rash et al., 2017). Supplementing CM with nurse-led case management is also associated with reduced drug use and reduced number of sexual partners among sexual minorities (e.g., gay, bisexual) experiencing homelessness and using stimulants (Nyamathi et al., 2017; Zhang et al., 2018).

For more guidance on providing SUD and mental health services for people who are homeless or experiencing unstable housing, see TIP 55, *Behavioral Health Services for People Who Are Homeless* (<https://store.samhsa.gov/product/TIP-55-Behavioral-Health-Services-for-People-Who-Are-Homeless/SMA15-4734>).

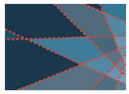
Rural Populations

According to 2010 census data, approximately 20 percent of the U.S. population lives in rural areas, with 704 counties or county statistical equivalents classified as completely rural and 1,185 counties or county statistical equivalents classified as mostly rural (Ratcliffe et al., 2016). Most of these counties are in Western states, where MA use is high.

Rural areas offer drug manufacturers and dealers secluded areas in which to produce illegal drugs, including MA; access to major routes for transporting illegal drugs to other regions for sale and distribution; and a customer base. Illegal drug manufacturers and dealers can often operate in rural areas with minimal risk of discovery because of fewer local law enforcement resources.

Prevalence in Rural Areas

MA has the highest availability in the Western and Midwestern United States, with more than 70 percent of local law enforcement agencies in these



areas identifying it as the greatest drug threat (NIDA, 2019d). In nonmetro areas, an estimated 8,000 adolescents ages 12 through 17 took part in past-year use of MA in 2019 (CBHSQ, 2020a). Similarly, an estimated 465,000 adults age 18 and older engaged in past-year use of MA in 2019 (CBHSQ, 2020a).

Rates of cocaine use in nonmetro areas were comparable to rates of MA use, with 10,000 adolescents ages 12 through 17 and an estimated 466,000 adults age 18 and older taking part in past-year use in 2019 (CBHSQ, 2020a).

Results from the 2019 NSDUH also showed that 48,000 adolescents ages 12 through 17 who were living in nonmetro areas engaged in past-year misuse of prescription stimulants (CBHSQ, 2020a). Further, 456,000 adults age 18 and older who were living in nonmetro areas engaged in past-year misuse of prescription stimulants (CBHSQ, 2020a).

Treatment admissions for MA are highest in Western states. Data from the National Drug Early Warning System suggest 12 to 29 percent of sites located west of the Mississippi River reported MA as the primary substance for treatment admission, compared with less than 1 percent of sites east of the Mississippi River (NIDA, 2019d).

In 2017, there were approximately 140,000 primary MA admissions among people age 12 and older in Western states, compared with approximately 13,000 primary cocaine admissions in the same group (CBHSQ, 2019). Primary MA admission rates rose consistently in Southern and Midwestern states between 2011 and 2017 (CBHSQ, 2019).

Challenges, Limitations, and Barriers to Treatment Services Faced by Rural Areas

Many rural areas have no specialized SUD treatment at all. Often, only one multiservice provider is available, and that provider can be overwhelmed by the area's various needs (L. B. Young et al., 2015). Additionally, rural areas have fewer formalized processes available to support and facilitate case management (Clary et al., 2020). Budget constraints limit SUD care, staff salaries (which contributes to high staff turnover), and the ability to provide support services such as

childcare or transportation. There are rarely any sources within the community from which to seek additional funding.

Lack of SUD treatment providers and lack of public transportation in rural areas make accessing specialty SUD care difficult for many rural patients (SAMHSA, 2016). Lack of privacy is another barrier to treatment. When a rural community has one or more SUD treatment providers, the comings and goings of patients can often be easily observed by people who know them (Clary et al., 2020; L. B. Young et al., 2015). This can contribute to concerns about stigma associated with seeking SUD services. Offering telehealth will not always overcome these barriers, as many rural households lack high-speed broadband Internet access (SAMHSA, 2021b).

Lack of access to medical services and insurance is a major barrier in providing evidence-based treatment services for people using stimulants. Advocacy for expanded Medicaid programs and coverage of evidence-based treatments like CM is necessary to adequately address the needs of rural populations (Clary et al., 2020; Cucciare et al., 2019).

Strategies To Provide Services in Rural Areas

Using the following strategies can help provide treatment services to rural populations:

- Partner with local agencies and stakeholders. Public safety and public health organizations can help create a coordinated response that streamlines the care of patients who use stimulants.
- Partner with public and private schools to provide information about prescription stimulant misuse in youth. This includes educating middle and high school students about the dangers of prescription stimulant misuse and strategies for coping with academic demands.
- Identify patients' nontreatment needs, provide temporary case management, and make referrals to case managers for ongoing support.
- Use telehealth to access experts who can provide specialty training for staff (e.g., Project ECHO; Browne et al., 2016; Zhou et al., 2016).

- Provide education about stimulant use disorders to local community members to raise awareness regarding treatment options.
- Increase access to treatment by using one or more medical vans to take SUD services and other care to rural communities (Gibson et al., 2014).
- Provide safe, substance-free living arrangements for patients who do not reside nearby. Funds can be specially designated, solicited through recovery community networking, or obtained through donations.
- Provide treatment services that are flexible in scope and structure (Browne et al., 2016; Timko et al., 2016). For example, an intensive outpatient (IOP) program might offer longer sessions on weekends instead of shorter, more frequent weekday sessions.
- Maximize patient engagement by assigning homework, arranging phone check-ins, having drug testing done by outlying clinics, using online communication, and holding weekend workshops or retreats.
- Use nontraditional sites and work arrangements to provide treatment services. If a treatment facility in a small rural community is not realistic, employ a part-time person who travels to satellite sites to provide outpatient services.
- Increase access to care via telemedicine and virtual visits (SAMHSA, 2016, 2021b). Additional research is needed to evaluate whether methods of access affect treatment outcomes for individuals with stimulant use disorders.
- Promote engagement in social–recreational activities beyond traditional mutual-help groups. Among rural people who use stimulants, increased engagement in social–recreational activities was associated with decreased substance use and decreased criminal recidivism (Timko et al., 2017).

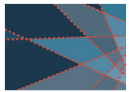
See this Rural Health Information Hub (<https://www.ruralhealthinfo.org/topics/substance-use>) webpage on substance use in rural areas for resources and more information.

People Involved in the Criminal Justice System

The number of people in state and federal prisons in the United States has been declining since its peak in 2008. Despite this decline, the United States still incarcerates a larger percentage of its population than any other country (Pew Research Center, 2020). According to the Department of Justice’s Bureau of Justice Statistics (BJS), 0.42 percent of U.S. residents—1.43 million people—were in state or federal prison in 2019 (Carson, 2020).

The rate of imprisonment for Blacks/African Americans is at its lowest since 1989, before laws passed during the “war on drugs” imposed stiff mandatory jail sentences for drug-related crimes (BJS, 2020). Since 2006, the imprisonment rate for Blacks/African Americans has dropped 34 percent. Over the same period, Hispanic and White Americans’ rates of imprisonment also dropped, by 26 and 17 percent, respectively. Even with the more rapid decline in their rates of incarceration, Blacks/African Americans are still imprisoned at a rate twice that of Hispanics and 5 times that of Whites (Pew Research Center, 2020).

Substance use and criminal justice involvement are highly correlated. The manufacture, possession, or sale of a variety of drugs are criminal offenses; thus, many people are in prison for committing drug-related crimes. Nearly 243,000 people nationwide are in state and federal prisons for drug offenses. As of May 2021, drug offenses accounted for almost half the inmates in federal prisons (46.3%, or more than 66,000 people; Federal Bureau of Prisons, 2021). In 2018, one in seven inmates in state prisons (14%, or more than 176,000 people) was serving time for a drug offense (Carson, 2020). About 21 percent of inmates in state prisons say they committed their crimes to obtain drugs or money to buy drugs (Bronson et al., 2017). Two out of every five state prison inmates committed their crimes while on drugs. One in 6 was taking crack/cocaine; 1 in 10 was taking other stimulants, including MA (Bronson et al., 2017). Stimulant-related offenses account for 75 percent of all federal drug crimes (CDC, 2019).



But beyond these connections, the link between substance use and criminal activity is correlational, not causal (Farabee, 2018). Precisely how many people in prison have SUDs is not known, but an estimated 65 percent of the prison population has an SUD (NIDA, 2020c). In some studies of limited prison populations, the figure is as high as 87 percent (Proctor et al., 2019). According to BJS statistics, the incidence of SUDs among state prisoners is 14 times higher than among the general population not involved with the criminal justice system. Among state prisoners, 34 percent regularly used cocaine/crack and 23 percent regularly used other stimulants, including MA, with regular use defined as once a week for a month (Bronson et al., 2017). A study of 200 inmates in county jails found that, according to criteria in the fifth edition of *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*, 34 percent met criteria for stimulant use disorder, the most prevalent SUD among study participants (Proctor et al., 2019).

In 2018, fewer than one in four people in federal prison (about 23%) participated in SUD treatment (BJS, 2020). A large nationwide study found that 30 to 33 percent of people with criminal justice involvement in the previous year received treatment for SUDs (Saloner et al., 2016). For people who have been incarcerated, having cocaine use disorder was strongly associated with receiving SUD treatment, either during or after incarceration (J. Tsai & Gu, 2019). However, the researchers noted that despite the strong correlation, treatment usage rates were still low.

The relative lack of treatment for people in prison represents a missed opportunity. Many are experiencing an extended period during which they are not using drugs and have available time and a structured environment in which to undertake treatment, yet access to evidence-based treatments is limited. Treatment in prison often consists mainly of mutual-help groups like Alcoholics Anonymous and Narcotics Anonymous or psychoeducation (J. Tsai & Gu, 2019). Other therapeutic approaches available to prisoners include CM, therapeutic communities (TCs), CBT, motivational enhancement therapy, and counseling that includes vocational and life-skills instruction.

As with people who are not incarcerated, social support is a key aspect of SUD treatment for people in prison. Inmates who receive more visits and phone calls from family and friends and who are allowed furlough days are more likely to access treatment while incarcerated. Compared with Black/African American and Latino prisoners, Whites were more likely to receive such social support (Nowotny, 2015).

Social support can also be particularly meaningful and effective when it comes from a peer recovery support specialist with a lived experience of incarceration and recovery from SUDs (Barrenger et al., 2019). A review of peer-delivered support services for SUDs among incarcerated individuals found evidence that peer services were associated with an increase in 30-day abstinence rates before release from incarceration, a greater likelihood of completing SUD treatment once released, and a decrease in future criminal justice charges (Bassuk et al., 2016).

One example of how peer recovery support specialists can perform outreach in a criminal justice setting is providing recovery education to incarcerated individuals in the jail or prison. The incarcerated individual receives information about how to contact a peer recovery support specialist. Thirty days before release, the individual calls the peer recovery support specialist and they begin building a relationship. The peer recovery support specialist helps the individual get a head start on developing a recovery plan in preparation for returning to the community.

Cos and colleagues (2020) looked at the use of peer recovery support specialists in an integrated, primary-care-based SUD treatment program in which all patients had a history of arrest with or without conviction, incarceration, or other criminal justice system involvement. Participation in the program was associated with a decrease in the percentage of patients using substances in the past 30 days, a reduction in number of days using alcohol, an increase in patient engagement in medical services after program enrollment, an increase in school enrollment, and an increase in rates of employment (Cos et al., 2020).

Therapeutic approaches that have been successful in treating stimulant use disorder in general populations (e.g., CBT, CM) have also shown success among criminal justice-involved populations, but much research into SUD treatment among prison populations has focused on TCs. TCs require long-term residence and center on peer group processes to promote behavioral change, making them ideally suited for incarcerated populations. A meta-analysis of therapeutic approaches used to treat SUDs in prison populations found that TCs were most effective at reducing recidivism and drug use after prisoners were released (Mitchell et al., 2012).

Reentering society after imprisonment is a challenge for all prisoners. Those with SUDs face the additional challenge of being back in the environment in which they used substances. Research indicates that released prisoners who used MA and cocaine at the time they entered prison have higher rates of recidivism than other former inmates, with the exception of those with OUD (Cumming et al., 2020; Wimberly et al., 2018). Follow-up care, in the form of telephone monitoring and counseling, in addition to IOP treatment, has been shown to decrease the odds of people with cocaine dependence having a criminal conviction for 4 years following release from prison, when compared with those who had only IOP treatment (Wimberly et al., 2018).

Prisoners with stimulant use disorders who are reentering society should be referred to SUD care. Recovery support and other services they may benefit from include:

- Continued interaction with peer recovery support specialists.
- Connection to support services (e.g., reentry programs, vocational rehabilitation, transportation and housing assistance) in the community.
- Multidisciplinary case management services for medical and psychiatric care.

For more information on this topic, see these SAMHSA publications: *Principles of Community-based Behavioral Health Services for Justice-involved Individuals: A Research-based*

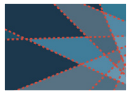
Guide (<https://store.samhsa.gov/product/Principles-of-Community-based-Behavioral-Health-Services-for-Justice-involved-Individuals-A-Research-based-Guide/SMA19-5097>); TIP 44, *Substance Abuse Treatment for Adults in the Criminal Justice System* (<https://store.samhsa.gov/product/TIP-44-Substance-Abuse-Treatment-for-Adults-in-the-Criminal-Justice-System/SMA13-4056>); and *After Incarceration: A Guide to Helping Women Reenter the Community* (<https://store.samhsa.gov/product/After-Incarceration-A-Guide-To-Helping-Women-Reenter-the-Community/PEP20-05-01-001>).

People Taking Medication for Opioid Use Disorder

People receiving OUD medication treatment may be prescribed one of the three Food and Drug Administration (FDA)-approved medications for OUD: methadone, buprenorphine, or naltrexone. All three may be offered by federally approved opioid treatment programs (OTPs). Buprenorphine treatment may be offered in other settings by healthcare professionals with the federal waiver required for prescribing buprenorphine, and naltrexone may be offered by any prescriber (SAMHSA, 2020h).

Cocaine is among the nonopioid substances most frequently used by people taking medication for OUD. It was present among 24 percent of patients in one study of more than 19,000 OTP admissions from 2011 to 2013 (Fong et al., 2015). In a trial of 177 patients being treated with buprenorphine, 26 percent screened positive for DSM-IV-defined cocaine abuse or dependence (APA, 2000; Schottenfeld et al., 2014). And among 791 pregnant women receiving methadone or buprenorphine, 21 percent had a history of cocaine use, whereas 1.4 percent had a history of amphetamine/MA use (Krans et al., 2016).

Among patients entering OTPs for OUD between 2012 and 2018, the prevalence of past-month MA use rose from almost 8 percent to about 21 percent (Severtson et al., 2019). In 799 patients taking buprenorphine through the SAMHSA-funded Washington State Medication Assisted Treatment–Prescription Drug and Opioid Addiction



(WA-MAT-PDOA) program clinic between 2015 and 2018, 30 percent reported past-month MA use and 15 percent past-month cocaine use (Tsui et al., 2020).

Clinicians treating patients for OUD should also make efforts to help patients stop or reduce any stimulant use. Regular cocaine use can decrease serum concentrations of methadone and buprenorphine and—in patients without HIV—may reduce peak concentrations of methadone (Tetrault et al., 2015). The potential effects of cocaine on the pharmacokinetics of opioid agonist therapy are important, because people taking opioid agonist medication and using cocaine at the same time may not experience the full clinical benefit of the medication, which could lead to poor treatment outcomes (Tetrault et al., 2015). Also of note, both cocaine and MA may increase the risk of cardiac arrhythmia in the presence of methadone. Therefore, patients with current or past stimulant use who are taking methadone for OUD should be assessed and monitored for risk of cardiac arrhythmias, specifically a risk for prolonged QT interval. (For more information, see TIP 63, *Medications for Opioid Use Disorder* [<https://store.samhsa.gov/product/TIP-63-Medications-for-Opioid-Use-Disorder-Full-Document/PEP20-02-01-006>]).

Some patients may report that methadone lengthens and mellows the effects of cocaine, presumably attenuating negative reinforcers associated with acute cocaine withdrawal. Patients taking buprenorphine or methadone for OUD who continue to use stimulants should not have their OUD medication stopped (American Society of Addiction Medicine, 2020). It is more appropriate to increase services and add adjuvant treatment, including CM, closer cardiac monitoring, and harm reduction education.

Longitudinal data are lacking on whether and how OUD medication might affect co-occurring stimulant and opioid use disorders (Rawson, 2020). In the case of cocaine use while on medication for OUD, findings thus far are mixed. In one study, cocaine use was associated with shortened duration of abstinence from opioids following methadone or buprenorphine/naloxone treatment (Zhu et al., 2018). But two other studies found no

effect of cocaine use on retention in buprenorphine treatment (C. O. Cunningham et al., 2013; Weinstein et al. 2017). Among OTP patients with baseline cocaine use who were randomized to either buprenorphine/naloxone or methadone, methadone was more effective at reducing number of days of opioid use, whereas the two medications were equally effective at reducing opioid use in patients without baseline cocaine use (Hser et al., 2016). Thus, in some OTP patients who have concurrent opioid and cocaine use, methadone might be more effective than buprenorphine/naloxone in helping them achieve abstinence from opioids, but it is unclear which OUD medication would definitively yield better results for patients with both opioid and stimulant use disorders.

Compared with cocaine, there appears to be less research about the effects of MA on opioid medication, but what data are available suggest a negative relationship. In the WA-MAT-PDOA study, people with past-month MA use were in buprenorphine treatment for a significantly shorter length of time and were more likely to drop out or be terminated from treatment within the first 3 months, compared with people who did not report past-month MA use (Tsui et al., 2020). Past-month MA use in the same study was associated with more than 2 times the relative risk for treatment nonretention than not having past-month MA use.

There appears to be very limited data from U.S. trials in humans on the effects of stimulants on naltrexone/extended-release naltrexone for OUD, making it hard to draw conclusions about whether cocaine and MA influence outcomes with these medications specifically. However, in some small samples, naltrexone has been associated with reduced cue-induced craving and subjective feelings of craving in people who use MA (Ray et al., 2015; Roche et al., 2017).

In a very small qualitative, exploratory study of 25 patients with current or recent stimulant use who were taking OUD medication, participants reported feeling that (Rawson, 2020):

- Stimulants seemed, subjectively, to be more “addicting” than opioids.
- Craving was a strong factor in their ambivalence about stopping stimulant use.

- Individual and group counseling was not helpful to their stopping stimulant use, but avoidance practices (e.g., not carrying cash, avoiding friends who use substances) were.

In addition, the few people in the study who had previously participated in CM for stimulant use reported finding it very helpful. (See Chapter 4 for more information about CM for stimulant use.)

Peer recovery support specialists can play a role in helping people with OUD access medication treatment. Samuels et al. (2019) trained recovery coaches (another term for peer recovery support specialist) from a community-based recovery organization to approach patients treated and discharged from an emergency department following opioid overdose. Recovery coaches were trained to assess overdose risk factors and readiness to seek treatment and to provide individualized support and linkage to providers who could prescribe medication for OUD. The median number of days before starting OUD medication was shorter among the people given access to a recovery coach, compared with people discharged as usual.

People Who Inject Drugs

Injecting cocaine or MA, like injecting other drugs, poses a major public health problem because of potential HIV and hepatitis transmission. This transmission can occur when people who inject cocaine or MA share infected injecting equipment. Transmission can also occur when PWID with HIV or hepatitis have sexual contact, especially unsafe contact, with others.

Prevalence of Injecting Drugs in People Who Use Stimulants

An estimated 6.6 million people age 13 and older, representing 2.6 percent of the U.S. population, had injected drugs, including stimulants, as of 2011 (Lansky et al., 2014). Among adults reporting past-year MA use between 2015 and 2018, 22.3 percent injected MA (C. M. Jones et al., 2020). Many PWID have unmet healthcare service needs and poorer long-term outcomes, like experiencing homelessness or incarceration (Dasgupta et al., 2020; Genberg et al., 2015; Linton et al., 2013; Robbins et al., 2010).

Pattern of Use and the Consequences

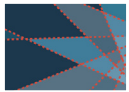
One factor that may increase risk of infection among PWID is their pattern of use. Cocaine is frequently used in intermittent cycles of repeated multiple uses known as binges (Vosburg et al., 2010). This pattern of use, observed in human laboratory studies (Foltin et al., 2015; Vosburg et al., 2010), often leads to more frequent injections during a binge than are generally observed in people with opioid use disorder.

This greater frequency of injection during a binge appears to have a greater likelihood of HIV infection. In a meta-analysis of global HIV risk among PWID (including in North America), the risk of HIV incidence was 3.6 times higher for people injecting cocaine and 3.0 times higher for people injecting amphetamine-type stimulants, compared with the risk for people who had not injected the drugs in the previous 6 months (Tavitian-Exley et al., 2015).

Data from CDC suggest that PWID are about 16 times more likely than people without injection drug use to develop invasive methicillin-resistant *Staphylococcus aureus* (staph) infections (Jackson et al., 2018). Another emerging medical issue related to injection drug use CDC has identified is infective endocarditis (an infection in the heart; CDC, n.d.-e). Injection drug use is the main cause of infective endocarditis. Anywhere from 5 to 10 percent of total deaths among PWID are due to this condition (Ji et al., 2012), which has an inpatient mortality rate of about 5 to 8 percent. The number of PWID younger than age 35 who died from infective endocarditis doubled from 1999 to 2016 (Kadri et al., 2019). *Staphylococcus aureus* causes between 52 and 62 percent of cases of infective endocarditis in PWID (See et al., 2020).

Reducing Injection Drug Use and Its Consequences

A variety of interventions have been used to prevent the initiation of injection drug use (for a review, see Werb et al., 2013) and reduce the consequences of injection drug use (for reviews, see Jeal et al., 2015; MacArthur et al., 2014). These interventions are tailored to PWID in general. Beyond promoting cessation of injection drug use



through comprehensive SUD care, it is important to educate PWID regarding harm reduction principles and safer injection practices to avoid the negative consequences of injection drug use.

Evidence shows that multicomponent HIV prevention programs—which provide antiretroviral medication, HIV testing, access to and education about condoms, and behavioral prevention skills training to people with HIV and their partners—reduce the risk of transmission over time (CDC, 2016).

Syringe access programs have been implemented in a wide variety of circumstances throughout the world (Des Jarlais et al., 2013; Nguyen et al., 2014). Research on syringe access programs show that they reduce the risk of HIV and hepatitis and do not lead to more injection drug use (Abdul-Quader et al., 2013; Bramson et al., 2015; CDC, n.d.-f). Furthermore, education on safer injection practices reduces the risk of skin and soft tissue infection among PWID (Baltes et al., 2020). To learn about recommendations and guidelines for safer injection practices (e.g., supplies, injection sites, injection processes), see the National Harm Reduction Coalition's *Getting Off Right: A Safety Manual for Injection Drug Users* (<https://harmreduction.org/issues/safer-drug-use/injection-safety-manual/>) and the Boston Public Health Commission's Access Harm Reduction Overdose Prevention and Education Program Participant Guide (<https://www.bphc.org/whatwedo/Recovery-Services/services-for-active-users/Documents/Client%20Manual%20FINAL.pdf>).

Although research supports the use of syringe access programs (Platt et al., 2017) and safer injection education (Des Jarlais, 2017), barriers exist to using them for HIV and hepatitis risk reduction. For example, a study of adults who inject heroin identified greater distance from syringe access programs, worries about potential arrest for possession of syringes, and lack of appropriate preparation (i.e., not having alcohol, alcohol wipes, or new syringes available) as barriers to use of sterile needles (Phillips, 2016). Further, perceived stigma from pharmacists and syringe access program staff can also affect engagement among PWID (Paquette et al., 2018; Rivera et al., 2014).

Prior to the implementation of syringe access programs, the 1995 report *Preventing HIV Transmission: The Role of Sterile Needles and Bleach*, produced by a panel organized by the National Research Council and the Institute of Medicine (IOM; now the National Academy of Medicine), states that bleach disinfection, when performed according to the guidelines provided by CDC and SAMHSA's Center for Substance Abuse Treatment, is useful in preventing HIV infection for PWID who share injecting equipment. The IOM report recommends that PWID be trained in effective procedures and more research be conducted to identify the simplest effective disinfection procedures. Bleach disinfection is recommended in situations where alternative, effective interventions (e.g., syringe exchange programs) are not available.

People Living With HIV/AIDS

People who use stimulants are at higher risk for HIV acquisition, as they are more likely to (SAMHSA, 2020j):

- Engage in condomless sex.
- Have multiple sexual partners.
- Reuse or share injection drug equipment.

People who inject stimulants may be at elevated risk for HIV acquisition compared with individuals who inject other substances, because of the frequency with which injection of stimulants occurs (Tavitian-Exley et al. 2015). Sexual activity, in particular being an anal receptive partner, and needle sharing are common routes of HIV acquisition for people who inject stimulants. Exhibit 6.2 lists the probabilities of acquiring HIV from an infected source for various types of exposure. Providers need to address risk factors for HIV transmission with patients using stimulants.

EXHIBIT 6.2. Estimated Per-Act Probability of Acquiring HIV From an Infected Source by Exposure Act*

TYPE OF EXPOSURE	RISK PER 10,000 EXPOSURES
PARENTERAL (I.E., NONORAL)	
Blood Transfusion	9,250
Needle-Sharing During Injection Drug Use	63
Percutaneous (Needle-Stick)	23
SEXUAL	
Receptive Anal Intercourse	138
Insertive Anal Intercourse	11
Receptive Penile-Vaginal Intercourse	8
Insertive Penile-Vaginal Intercourse	4
Receptive Oral Intercourse	Low
Insertive Oral Intercourse	Low
OTHER†	
Biting	Negligible
Spitting	Negligible
Throwing Body Fluids (Including Semen or Saliva)	Negligible
Sharing Sex Toys	Negligible

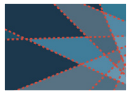
*Factors that may increase the risk of HIV transmission include sexually transmitted diseases, acute and late-stage HIV infection, and high viral load. Factors that may decrease the risk include condom use, male circumcision, antiretroviral treatment, and PrEP. None of these factors are accounted for in the estimates presented in the table.

†HIV transmission through these exposure routes is technically possible but unlikely and not well documented.

Sources:

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Source: Adapted from CDC (n.d.-b). Estimated per-act probability of acquiring HIV from an infected source, by exposure act (<https://www.cdc.gov/hiv/risk/estimates/riskbehaviors.html>).



Screening people with stimulant use disorders for HIV should be part of the standard of care provided by SUD treatment programs (SAMHSA, 2020j). Patients may be reluctant to undergo an HIV test because they fear the results or because of stigma related to HIV/AIDS. Clinicians can help to increase both HIV testing uptake and engagement among patients who have a positive test by educating patients about effective treatments for HIV and the concept of “undetectable equals untransmittable” (U=U). The U=U slogan, which is part of the Prevention Access Campaign, conveys to patients that they cannot transmit HIV sexually if they are adherent to antiretroviral therapy (ART) and they do not have detectable levels of HIV in their blood for at least 6 months (Eisinger et al., 2019). In the setting of highly active antiretrovirals, a durably suppressed HIV viral load truly is treatment as prevention.

Many factors may delay a diagnosis of HIV in patients who use stimulants and it is more likely that patients using stimulants will have an AIDS diagnosis at the time of their positive HIV test (United Nations Office on Drugs and Crime, 2019a). Patients living with HIV and using stimulants may have increased risk for progression to an AIDS diagnosis and increased all-cause mortality (Carrico et al., 2014).

For patients who have a positive HIV screen, clinicians should confirm the diagnosis and link the patients to HIV care immediately for evaluation by a treatment provider (SAMHSA, 2020j). This may be overwhelming for patients, particularly in the setting of active substance use. Clinicians can avoid delays in linkage to care and promote patient safety by using a warm-handoff approach, in which the patient’s care is transferred between providers in the presence of the patient.

Treating people living with HIV/AIDS (PLWHA) is another area in which program linkages become critical to successful treatment. It is helpful, where possible, to have medical staff skilled in both HIV and SUD care to provide patients convenient access to treatment for both chronic health conditions. Given the complex stigma patients face when living with HIV and SUD, it is imperative to seamlessly transition patients and refer them to appropriate care providers.

Although ART has advanced significantly and new medication regimens like long-acting injectable products are on the horizon, daily medication adherence is still pivotal to having a durably suppressed viral load. In patients injecting stimulants, daily ART adherence is affected. Stimulant use is correlated with lower daily adherence, but does not necessarily correlate with increased levels of detectable HIV viral loads (Marquez et al., 2009). Additional research has found that positive affect intervention coupled with community-based CM may be effective in increasing viral suppression and limiting patients’ stimulant use (Carrico, Hunt, et al., 2019; Carrico, Neilands, et al., 2019).

MA has been associated globally not only with higher rates of HIV acquisition, but also with more difficulty in patients reaching HIV viral suppression (Mastro et al., 2020). Among people who use MA and are living with HIV, there is an increased likelihood of transmitted drug resistance (Cachay et al., 2007). Multiple mechanisms of action have been indicated for the worsening outcomes for PLWHA and using MA, including inflammation (Castillo-Mancilla et al., 2016), increased viral replication (Mastro et al., 2020), and immunologic dysfunction (Carrico et al., 2018) related to substance use.

One of the critical aspects of providing SUD treatment to PLWHA is the continuing education that clinicians need regarding the changing and complex array of medication regimens available to this population. Further, clinicians need an awareness of the compounded stigma that many PLWHA who use stimulants may face in seeking treatment in traditional medical systems (Brinkley-Rubinstein, 2015; Pescosolido & Martin, 2015).

Peer support may be crucial in helping PLWHA feel understood, encouraged, and supported in their recovery journey. In addition to facing SUDs, PLWHA may also be dealing with mental health issues and trauma, all of which make the recovery process particularly complex. Support from a peer can be powerful because of their understanding of:

- The complexities of living with HIV/AIDS.
- Accompanying substance-related, mental, and social needs.
- Ways to access needed resources.

For more information on this topic, see SAMHSA's publication *Prevention and Treatment of HIV Among People Living with Substance Use and/or Mental Disorders* (<https://store.samhsa.gov/product/Prevention-and-Treatment-of-HIV-Among-People-Living-with-Substance-Use-and-or-Mental-Disorders/PEP20-06-03-001>).

People With or At Risk for Hepatitis

Hepatitis is an inflammation of the liver. It is often caused by viruses, the most common of which in the United States are hepatitis A virus (HAV), hepatitis B virus (HBV), and HCV. HCV is the most prevalent hepatitis virus in the United States (CDC, 2021d). The primary mode of HCV transmission is injection drug use, particularly among young adults and rural populations (Harris et al., 2016; Iqbal et al., 2015; Page et al., 2013). Sexual contact is another common mode of transmission, particularly among PWID with sexual behavior with an elevated risk of tissue tearing (Tracy et al., 2014) or with co-occurring HIV infection (J. Chen et al., 2014).

The prevalence of lifetime HCV infection among PWID ranges from 65 to 90 percent (Crawford & Bath, 2013; P. K. Nelson et al., 2011). HCV seropositivity is correlated with duration and frequency of injection (CDC, 2011). Among PWID who are also MSM and have HIV infection, the prevalence of detectable HCV infection is 40 percent (Jordan et al., 2017).

In a study of individuals who reported lifetime use of MA and who had susceptibility to HBV, 6.95 percent had active HCV infection (Tressler et al., 2020). People who use both MA and opioids have been shown to be almost twice as likely to have HBV or HCV compared with individuals who use opioids alone (Shearer et al., 2020). Another study found that among individuals who reported lifetime use of cocaine, 22 percent reported a history of HCV and 8 percent reported a history of HBV (Novick et al., 2016).

HCV begins as an acute infection but may become chronic, which can lead to liver disease, other serious health consequences, and death (SAMHSA, 2015). It is important to educate patients on the

symptoms of acute HCV infection to increase the likelihood of screening and healthcare-seeking behaviors. One of the biggest barriers to medical treatment for HCV is that 65 to 75 percent of people with chronic HCV infection are unaware of their status because they are asymptomatic and likely will be until the disease advances (McGowan & Fried, 2012). It is also apparent from in vitro studies and animal data that stimulant use may promote HCV replication and in turn increase disease progression (Ye et al., 2008).

Although no vaccine exists for HCV, effective and well-tolerated medications that can cure HCV are now available. The SIMPLIFY study demonstrated that stimulant use negatively impacts adherence to directly acting antivirals. However, the same study indicated that despite the issues with adherence related to stimulant use, patients continue to experience a functional cure with the completion of the therapeutic regimen (E. B. Cunningham et al., 2018).

Vaccines for HAV and HBV have existed for years (CDC, 2015), although HBV vaccination coverage among adults remains low, especially among PWID (Harris et al., 2016). Despite the availability of HAV and HBV vaccines, outbreaks of these infections have occurred in many states in the past decade. HBV outbreaks have been attributed in large part to injection drug use, and people who use drugs. Additionally, PWID are at increased risk for HAV, which is foodborne (CDC, 2021c; Foster et al., 2019; Iqbal et al., 2015).

SUD care providers can make a major contribution to public health, as well as their patients' health, by screening for viral hepatitis or assisting patients in getting such screening. Exhibit 6.3 describes hepatitis risk and prevention for people who use stimulants. The U.S. Preventive Services Task Force (USPSTF) recommends screening for HBV in adolescents and adults at increased risk for infection, which includes PWID (USPSTF, 2020b). The USPSTF recommends HCV screening at least once for all adults, but periodically for people at continued risk for HCV, which includes PWID (USPSTF, 2020a). SUD care for people with stimulant use or at risk for stimulant use ideally should include a screening for viral hepatitis in the initial assessment.

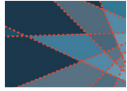


EXHIBIT 6.3. Hepatitis Risk and Prevention for People Who Use Stimulants

VIRUS	TRANSMISSION ROUTE	WHY PEOPLE WHO USE STIMULANTS ARE AT RISK	PREVENTION STRATEGIES
HAV	Fecal-oral	<p>MSM and people who use drugs have an increased risk for HAV infection (CDC, n.d.-c).</p> <p>Patients who use stimulants may be experiencing homelessness/unstable housing or otherwise are living in situations that are not adequate for hygienically preparing food. This is a risk factor because the virus can be contracted through HAV-contaminated food and water (CDC, 2020b).</p>	<p>Encourage patients to get their HAV vaccination (N. P. Nelson et al., 2020).</p> <p>Help patients with any personal hygiene needs and food preparation assistance (e.g., education about the dangers of eating uncooked food and how that might lead to HAV transmission; N. P. Nelson et al., 2020).</p>
HBV	Blood and body fluids	<p>Condomless sex with a partner living with HBV increases the odds of HBV transmission, particularly in the setting of dry mucosa and tissue tearing secondary to stimulant use.</p>	<p>Encourage patients to get their HBV vaccination (Schillie et al., 2018).</p> <p>Offer patients access to condoms for anal and vaginal intercourse.</p>
HCV	Blood-blood	<p>People who use stimulants may be injecting them, and injection drug use (including syringe sharing) increases the risk of HCV transmission among people using stimulants (Farrell et al., 2019).</p> <p>Stimulants can dry out body mucosa, increasing the risk for tissue tearing and transmission of HCV during sexual activities.</p> <p>People smoking or insufflating (i.e., snorting or inhaling) stimulants may share pipes or stems and have cracked lips, which could be a potential source of blood-blood transmission.</p> <p>People injecting stimulants may inject multiple times during a binge and may share injection equipment with others who are using injection drugs.</p>	<p>Offer patients treatments and services to help them stop injecting drugs (Office of Infectious Disease and HIV/AIDS Policy [OIDP], n.d.-b).</p> <p>Psychosocial treatments to stop stimulant use altogether also should be offered (Farrell et al., 2019).</p> <p>Teach patients about how to access and use safer injection equipment, and offer education about safer injection practices (Farrell et al., 2019; OIDP, n.d.-b).</p> <p>Educate patients about and encourage patients to practice safer sex while using stimulants (Farrell et al., 2019; OIDP, n.d.-b.). Offer patients access to condoms and lubrication for vaginal and anal sex.</p>

Providers who conduct these screenings need to recognize that individuals may hesitate to answer questions about injection drug use, sexual history, or potential risk for hepatitis because of mistrust, stigma, and discrimination. Further, hepatitis infection may be misattributed to sexual contact among PWID who provide accurate responses about their sexual practices but do not admit to injection drug use (Klevens et al., 2012), putting them at future risk for reinfection if they do not receive SUD treatment or harm reduction education.

SAMHSA's Hepatitis C Screening in the Behavioral Healthcare Setting *Advisory* (<https://store.samhsa.gov/product/Advisory-Hepatitis-C-Screening-in-the-Behavioral-Healthcare-Setting/sma15-4917>) provides an overview of how and why to conduct or make referrals for HCV screening, and also looks at the ways HAV, HBV, and HCV are transmitted. For additional information and resources, see the CDC Viral Hepatitis webpage (<https://www.cdc.gov/hepatitis/index.htm>).

Clinicians should also integrate education on hepatitis into SUD care. Education should include information, as appropriate, about the health benefits of:

- Participating in syringe services programs.
- Using protection when engaging in sex.
- Getting vaccinated against HAV and HBV.
- Taking medication for HCV.

SAMHSA's comic book-style publication *Take Action Against Hepatitis C: For People in Recovery From Mental Illness or Addiction* (<https://store.samhsa.gov/product/Take-Action-Against-Hepatitis-C/sma14-4853>) provides information directed to patients.

Individuals With Co-Occurring Mental Disorders

A patient with CODs has a combination of two or more SUDs and mental disorders as defined in DSM-5 (SAMHSA, 2020). Although a stimulant use disorder can coexist with any mental disorder, this section focuses on some of the mental disorders that are most often diagnosed in people with

a stimulant use disorder: depressive disorders, bipolar disorder, anxiety disorders, PTSD, ADHD, and schizophrenia.

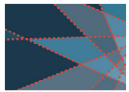
Someone who displays symptoms consistent with a mental disorder does not necessarily have an organic mental disorder but may have a substance-induced disorder or symptoms mimicking an organic mental disorder (per DSM-5). For example, people in withdrawal from stimulant use may show symptoms of depression, but they do not necessarily have a depressive disorder. Similarly, people who use MA may exhibit psychotic symptoms like those common in people with schizophrenia, but the psychotic symptoms are not conclusive evidence of schizophrenia and may resolve with cessation of substance use.

Other symptom clusters commonly associated with specific mental disorders are also frequently seen during the use of stimulants or during early abstinence. These symptom clusters include physical and psychological signs of anxiety, mood fluctuations, and antisocial behavior.

Some people with stimulant use seek psychiatric care for symptoms related to their stimulant use before entering SUD treatment. Some patients may use substances to treat symptoms of their organic mental illness rather than seeking formal treatment. In both cases, stigma about mental health concerns and SUDs can make people reluctant to engage in care (Zwick et al., 2020), which can result in a delayed diagnosis and ineffective treatment plans for individuals with co-occurring stimulant use disorder and mental illness (National Academies of Sciences, Engineering, and Medicine, 2016).

Someone with stimulant use who has previously received a psychiatric diagnosis or has symptoms typically associated with a mental disorder does not necessarily have CODs. Having CODs means both an SUD and a mental disorder are actively present, and the patient meets full criteria (rather than just symptoms) for both disorders.

The accurate diagnosis of mental illness in an individual with stimulant use requires considerable diagnostic skill on the part of the mental health service provider (Warden et al., 2016). It is often necessary to make a provisional diagnosis, which



is modified after additional data are collected. Additionally, for patients using stimulants like cocaine or MA, it is important to differentiate symptoms associated with an organic mental illness and symptoms of protracted withdrawal. For example, patients may have symptoms of depression and psychosis that accompany acute withdrawal symptoms, but they typically resolve within 1 week (Zorick et al., 2010).

Another important element in the diagnosis of a co-occurring mental disorder is obtaining a careful history of the chronological relationship between the onset of psychiatric symptoms and the substance use history. An accurate chronology can help clinicians determine whether there is a co-occurring mental disorder or the psychiatric symptoms are induced by the substance.

Clinicians should assess whether the outpatient setting is appropriate for evaluation of symptoms. Hospital admission allows for a more thorough evaluation of symptoms and factors that may contribute to the symptoms. Additionally, patients can be observed for resolution of particularly concerning symptoms, such as suicidal or homicidal ideation or psychotic symptoms that may affect individual or community safety (Kampman & Jarvais, 2015).

Given the many challenges people with CODs face, linking them with peer recovery support specialists may be beneficial. In one study, a treatment group of people with SUDs and co-occurring serious mental illness who participated in a peer support program spent more time living in the community before needing rehospitalization and had fewer rehospitalizations overall than did a comparison group without program participation (Min et al., 2007). Helping patients with CODs connect with peer recovery support specialists (including mutual-help programs devoted to CODs) should be a part of discharge planning, continuous care, and may even be combined with ongoing clinical interventions (e.g., CBT, medication treatment) to maximize positive outcomes (SAMHSA, 2020).

Mutual-help programs for people with CODs—often called dual recovery mutual-help programs—are available to help patients find direction and support for recovery from both

mental illness and SUDs. More information about accessing dual recovery mutual-help programs can be found in SAMHSA's TIP 42, *Substance Use Disorder Treatment for People With Co-Occurring Disorders* (<https://store.samhsa.gov/product/tip-42-substance-use-treatment-persons-co-occurring-disorders/PEP20-02-01-004>).

Specialized Treatment Interventions

Depressive disorders

Past-year major depressive disorder occurs in about 10 percent of U.S. adults (Hasin et al., 2018). Major depression appears to be about 1.5 times more prevalent in women than in men (Hasin et al., 2018). Persistent depressive disorder (previously called dysthymia) is likely much less common, although current U.S. prevalence rates are unclear at this time. Data based on diagnostic criteria from DSM-IV show a 12-month persistent depressive disorder prevalence of 1.5 percent in U.S. adults (Blanco et al., 2010). Co-occurring persistent depressive disorder and episodes of major depressive disorder, known as “double depression,” have been shown to occur in 14 percent of patients who seek treatment for SUDs (N. Diaz et al., 2012). In a sample of patients with any stimulant use disorder who were receiving residential treatment, 22.6 and 9.4 percent met diagnostic criteria for major depressive disorder and persistent depressive disorder, respectively (Warden et al., 2016).

To screen for depressive disorders, clinicians can use an evidence-based screener such as the Patient Health Questionnaire (PHQ-9; Beard et al., 2016; Bentley et al., 2021).

Key recommendations for clinicians working with patients who have co-occurring depressive disorders include (SAMHSA, 2020):

- Initiating medications as soon as patients engage in care (if feasible). It should be noted that for patients taking medications affecting serotonin (e.g., selective serotonin reuptake inhibitors), there may be an elevated risk for serotonin syndrome in the setting of continued

stimulant use. Patients should be educated about these signs and symptoms and advised on what to do should they experience them (Cooper & Sejnowski, 2013; Moss et al., 2019).

- Using integrated CBT approaches that draw on functional analysis of the relationship between depression and substance use, incorporate cognitive training, and encourage behavioral activation.
- Evaluating for the development of “double depression”—the occurrence of persistent depressive disorder and intermittent major depressive episodes.
- Evaluating whether antidepressant medication is warranted for managing depressive symptoms or providing a referral for a medication evaluation.
- Considering the temporal relationship between depression and SUD, which can be unclear and can affect treatment planning. Clinicians can avoid making assumptions about what is causing and maintaining depression or an SUD by using various treatment approaches that address both CODs.

Bipolar disorder

About 2 percent of U.S. adults report a lifetime history of bipolar disorder (Blanco et al., 2017). Results from the National Epidemiologic Survey on Alcohol and Related Conditions–III, a large epidemiological study using DSM-5 criteria, show a strong positive association between past-year drug use disorder (i.e., an SUD excluding alcohol) and bipolar I disorder, with an odds ratio of 1.5 (B. F. Grant et al., 2016). Patients with SUDs and bipolar disorder have an increased risk for an unstable and more severe course of illness, violence, and suicide (Swann, 2010). A co-occurring bipolar disorder and SUD is also associated with worse clinical outcomes compared with clinical outcomes for bipolar disorder alone (Farren et al., 2012).

Patients with bipolar disorder may use stimulants to self-treat depressive episodes. Additionally, given the elevated mood associated with stimulant use, it is not uncommon for patients using stimulants to experience manic symptoms while acutely intoxicated from stimulant use. Patients with bipolar disorder that is well managed by medication can be treated in traditional treatment

settings. Therefore, medication management, specifically daily adherence, is one of the most important issues in treating patients with bipolar disorder (Salloum & Brown, 2017).

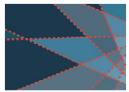
Anxiety disorders

In 2019, one in six (15.6%) adults age 18 and older reported experiencing symptoms of mild, moderate, or severe generalized anxiety within the past 2 weeks (Terlizzi & Villarreal, 2020). Nearly 7 percent of U.S. adults report having had panic disorder in their lifetime (Kessler et al., 2012). Patients with anxiety disorders and SUDs have greater symptom severity, more functional impairment, and poorer course of illness than patients with only an anxiety disorder or an SUD (Magidson et al. 2012; McHugh, 2015). In a sample of patients with any stimulant use disorder who were receiving residential treatment, 29.6 percent met diagnostic criteria for a co-occurring anxiety disorder, with generalized anxiety disorder (15.3%) and social phobia (10.6%) comprising the most common anxiety disorders (Warden et al., 2016).

To screen for generalized anxiety, clinicians can use an evidence-based screener such as the Generalized Anxiety Disorder scale (GAD-7; Bentley et al., 2021; Rutter & Brown, 2017).

Key recommendations for clinicians working with patients who have co-occurring anxiety disorders include (SAMHSA, 2020l):

- Identifying patients with elevated anxiety early in SUD treatment, which can help address risks that contribute to treatment engagement and retention as well as posttreatment relapse.
- Screening for elevated anxiety early in treatment to identify patients who may need additional skills to help them manage elevated distress related to stopping or decreasing their substance use.
- Discussing reasons for treatment concerns when relevant, especially adherence interference from anxiety symptoms or anxiety-related avoidance.
- Integrating a holistic approach to treatment, such as:
 - Providing psychoeducation about the nature of anxiety and its role in SUDs.



- Teaching CBT techniques to recognize and manage symptoms of anxiety.
- Discussing appropriate medication options, using motivational enhancement strategies.
- Practicing mindfulness techniques.
- Encouraging healthy lifestyle activities (e.g., diet, physical activity, sleep hygiene).
- Exercising extreme care in prescribing benzodiazepines for anxiety disorders, because of their high addiction potential.

Posttraumatic stress disorder

A strong association exists between PTSD and SUDs (B. F. Grant et al., 2015; B. F. Grant et al., 2016; Hasin & Kilcoyne, 2012). The lifetime prevalence of PTSD in people with SUDs is thought to range between 26 and 52 percent, and rates of current PTSD between 15 and 42 percent (Vujanovic et al., 2016).

People in treatment for a cocaine use disorder have double the odds of probable PTSD compared with people without cocaine use disorder, and the risk is greater for women than for men (Saunders et al., 2015). Among people who complete treatment for MA use disorder, PTSD is associated with more than 5 times greater odds of posttreatment MA use than not having PTSD (Glasner-Edwards et al., 2013). Women who are likely to experience trauma, such as those with current or past experiences of domestic violence, sexual assault, or homelessness, may be vulnerable to MA use and the negative effects of MA (Kittirattanapaiboon et al., 2017).

Clinicians need to obtain specialized training to work with individuals who have co-occurring SUD and PTSD. To screen for PTSD, clinicians can use an evidence-based screener such as the PTSD Checklist for DSM-5 (PCL-5; Blevins et al., 2015; Keane et al., 2014; LeardMann et al., 2021). Specialized treatment issues include relapse triggers, timing of addressing issues in group sessions, and the tools and social skills necessary to facilitate a successful recovery. Trauma-informed care should be universal throughout treatment settings. Learn more about how to provide trauma-informed care for patients with stimulant use disorders in SAMHSA's TIP 57, *Trauma-Informed Care in Behavioral Health Services* (<https://store.samhsa.gov/product/TIP-57-Trauma->

[Informed-Care-in-Behavioral-Health-Services/SMA14-4816](https://store.samhsa.gov/product/TIP-57-Trauma-Informed-Care-in-Behavioral-Health-Services/SMA14-4816)).

Key recommendations for clinicians working with patients who have co-occurring PTSD include:

- Acknowledging that disclosure is not the initial goal. Use a trauma-informed approach to help patients view the SUD care setting as a safe place at the beginning of treatment by using grounding exercises, treatment routines, safety-promoting behaviors, and safety plans. Be careful not to rush patients into discussing trauma and monitor the intensity and speed of the treatment for signs that patients are feeling overwhelmed (SAMHSA, 2020).
- Treating PTSD and stimulant use disorder concurrently, as PTSD symptoms can worsen during abstinence (SAMHSA, 2020).
- Implementing strategies to prevent retraumatization of patients, such as recognizing triggers and their cues, reacting to behaviors resulting from triggers in a sensitive manner, and teaching patients to identify and manage triggers (SAMHSA, 2020).
- Recognizing the cyclical relationship between trauma and substance use and providing education to patients about this relationship. Having an increased awareness of this relationship allows patients to develop and implement safeguards (SAMHSA, 2020).
- Referring patients to sexual assault and incest support groups as quickly as possible, as appropriate.
- Offering group counseling in a gender-responsive format that includes coaching on what to expect from dreams, fears, and sleep disruptions as a result of PTSD and withdrawal from stimulants.
- Providing information on practical tools to combat nightmares and sleep disruption—such as exercise, night lights, herbal teas, and relaxation techniques—as well as information on relapse triggers (McHugh et al., 2014). Such information will help provide patients with reassurance and skills to get through this period.
- Tailoring treatment to unique trauma-related symptoms and needs; the widely used Seeking Safety program is an example of such an approach (Berenz & Coffey, 2012; Lenz et al., 2016; Ruglass et al., 2014).

- Evaluating whether medication is warranted for managing PTSD symptoms or providing a referral for a medication evaluation (Berenz & Coffey, 2012).

Attention deficit hyperactivity disorder

The prevalence of ADHD is estimated to be 9.4 percent in children ages 2 to 17 (Danielson et al., 2018). The prevalence of adult ADHD is about 2.5 percent (Katzman et al., 2017). The co-occurrence of SUDs in people with ADHD is quite high, especially for cocaine, alcohol, nicotine, and cannabis (Klassen et al., 2012). Use of prescribed stimulant medication for children with ADHD is not associated with an increased risk of developing an SUD later in life (Klassen et al., 2012). Increasing numbers of young adults with ADHD are attending college, many of whom may be prescribed a prescription stimulant (Weyandt et al., 2013).

Clinicians need to retrieve a clear longitudinal history of both substance use and symptoms of ADHD before formalizing SUD and ADHD diagnoses. Symptoms of stimulant withdrawal or intoxication can mirror some symptoms of ADHD (e.g., impulsivity, attention difficulties, restlessness, agitation; Kaye et al., 2013). However, stimulant-related symptoms tend to disappear with time (when the patient is no longer in withdrawal or intoxicated).

Generally, adults with ADHD also had the disorder when they were children (that is, new onset usually does not occur in adulthood), although it may not have been diagnosed as such (Ahmad et al., 2019). An assessment of childhood symptoms should be part of completing the patient's history. The presence of ADHD symptoms in childhood provides a reliability measure for the presence of the adult disorder.

HOW TO TREAT ADHD IN PEOPLE WITH CO-OCCURRING STIMULANT USE DISORDER

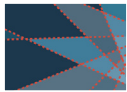
Stimulant medications are widely used, highly efficacious, and very effective for treating ADHD in children and adults. How can providers in primary care and integrated care settings approach ADHD management for adults who have co-occurring stimulant use disorder and want to pursue abstinence?

Not much research has been done on how best to treat patients with ADHD and co-occurring stimulant use disorder. The available studies have mixed findings on treatment effectiveness (J. Cook et al., 2017). High-dose stimulant medication has been suggested as a potential aid in reducing both ADHD and illicit stimulant use (J. Cook et al., 2017), with robust research support among people who use cocaine (Levin et al., 2015). This strategy would have to be used with diversion prevention and compliance/monitoring approaches, such as (Colaneri et al., 2017):

- Prescribing long-acting, rather than short-acting, stimulant formulations.
- Using medication contracts.
- Limiting prescriptions to a smaller number of pills.
- Implementing pill counts.
- Providing education about medications to patients.

For patients who want to be completely abstinent from all stimulants, several safe and effective nonstimulant ADHD medications with low addiction potential are available, such as atomoxetine, guanfacine, and clonidine (Clemow & Walker, 2014). Although not approved by FDA for the treatment of ADHD, antidepressants like venlafaxine and bupropion have also shown some use in reducing some ADHD symptoms (Katzman et al., 2017). However, nonstimulant medication is not considered a first-line pharmacotherapy for ADHD (Katzman et al., 2017). Pharmacotherapy should always be monitored closely for potential interactions with other drugs, side effects, or misuse, especially when prescribed to individuals with a history of SUDs.

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Several nonpharmacologic treatments for ADHD have demonstrated efficacy and should be a core part of any ADHD treatment plan, regardless of whether medication is also prescribed. In patients with stimulant use disorder who want to remain abstinent, reliance on nonpharmacologic interventions becomes even more critical. Such interventions are (Katzman et al., 2017):

- Psychoeducation (e.g., learning organizational skills, finding resources and support groups).
- Psychotherapy (e.g., CBT, interpersonal therapy).
- Behavioral interventions (e.g., teaching patients how to manage their environment, helping patients make healthy lifestyle changes, such as getting more exercise or better sleep).
- Social interventions (e.g., social skills training, anger management).
- School/workplace accommodations (e.g., being given extra time to complete tests, being allowed to close one's office door to minimize distractions).

Both conditions can be treated concurrently, but if the patient is destabilized because of stimulant use, the provider may need to address the SUD and stabilize the patient before pursuing ADHD treatment (Katzman et al., 2017).

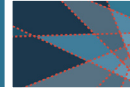
Schizophrenia

Schizophrenia is very uncommon in the United States, with somewhere between 0.3 and 0.7 percent of U.S. adults developing the disorder in their lifetime (APA, 2013). The prevalence of SUDs among people with schizophrenia is estimated to be as high as 55 percent (Kerner, 2015).

Key recommendations for clinicians working with patients who have co-occurring schizophrenia include:

- Treating SUD immediately to allow time for the medication for the mental illness to take effect. Both conditions should be treated at once, as substance use in schizophrenia can worsen disease course and may reduce adherence to antipsychotic medication (Werner & Covenas, 2017).
- Providing psychoeducation about schizophrenia, medication, and the importance of medication adherence for symptom control (SAMHSA, 2020).
- Beginning treatment with deescalation and treatment of the psychotic symptoms through sleep, medications, and nutritional support. This is recommended because continuous cocaine or MA use, particularly in the setting of sleep deprivation, may result in psychotic symptoms and in severe cases may be completely indistinguishable from paranoid schizophrenia (J. M. Wilkerson et al., 2018).
- Providing treatment for both schizophrenia and stimulant use disorder with slight modifications after a stabilization period.
- Teaching patients to detect early signs of relapse for both schizophrenia and stimulant use or prescription stimulant misuse (SAMHSA, 2020).
- Teaching patients to manage positive and negative symptoms of psychosis, increase coping skills, improve social skills (e.g., communication with others), expand social networks, enhance problem-solving abilities, build distress tolerance, increase motivation, and set and achieve goals.
- Modifying group counseling, so that groups are smaller and more structured than in traditional SUD treatment. Confrontational situations should be avoided. To be effective, each group session should focus on a particular skill or topic. For patients with unstable schizophrenia currently exhibiting uncontrolled positive symptoms, deferment of group counseling and continued individual counseling may be appropriate until stabilization occurs.

Learn more about treating patients with CODs in TIP 42 (<https://store.samhsa.gov/product/tip-42-substance-use-treatment-persons-co-occurring-disorders/PEP20-02-01-004>).



Summary

Patients who belong to specific populations with intrinsic vulnerabilities related to systems of care may have higher rates of stimulant use disorders and more difficulties engaging in care for these disorders. Factors that can influence treatment engagement among these special populations include location and availability of SUD programs and culturally competent clinicians, clinicians'

ability to foster trust and safe relationships, and clinicians' ability to apply individualized approaches. By understanding the needs of special populations with stimulant use disorders, as well as their care access issues and treatment considerations, clinicians can provide patient-centered, effective care that maximizes rapport and treatment engagement.

Appendix A: Treatment for Stimulant Use Disorders (TIP 33) Module 4

Directions: To receive credits for this course, you are required to take a post test and receive a passing score. We have set a minimum standard of 80% as the passing score to assure the highest standard of knowledge retention and understanding. The test is comprised of multiple choice and/or true/false questions that will investigate your knowledge and understanding of the materials found in this CEU Matrix – The Institute for Addiction and Criminal Justice distance learning course.

After you complete your reading and review of this material, you will need to answer each of the test questions.

Submit your test via the Internet. All of our tests are posted electronically, allowing immediate test results and quicker processing. First, you may want to answer your post test questions using the answer sheet found at the end of this appendix. Then, return to your browser and go to the Student Center located at:

<http://www.ceumatrix.com/studentcenter>

Once there, log in as a Returning Customer using your Email Address and Password. Then click on 'Take Exam' and you will be presented with the electronic exam.

To take the exam, simply select from the choices of "a" through "e" for each multiple choice question. For true/false questions, select either "a" for true, or "b" for false. Once you are done, simply click on the submit button at the bottom of the page. Your exam will be graded and you will receive your results immediately. If your score is 80% or greater you will have access to the Certificate of Completion. This is the final step in the process, and you may save and/or print your Certificate of Completion.

If, however, you do not achieve a passing score of at least 80%, you will need to review the course material and return to the Student Center to resubmit your answers.

If you have any difficulty with this process, or need assistance, please e-mail us at ceumatrix@ceumatrix.com and ask for help.

Answer the following questions by selecting the most appropriate response.

Quiz

1. What has contributed to the historical trauma experienced by Black/African American patients according to the document?
 - A. The civil rights movement
 - B. The war on drugs
 - C. The opioid crisis
 - D. The Great Recession
2. What percentage of Black/African American adults aged 18 and older reported past-year cocaine use in the document?
 - A. 0.2 percent
 - B. 1.0 percent
 - C. 2.4 percent
 - D. 0.8 percent
3. Which age group among Black/African Americans saw a significant decrease in methamphetamine use since 2017?
 - A. Ages 12 to 17
 - B. Ages 30 to 35
 - C. Ages 26 and older
 - D. Ages 18 to 25
4. What is one of the suggested strategies for clinicians to improve treatment engagement among racial/ethnic minority populations?
 - A. Standardized treatment protocols
 - B. Increased medication dosages
 - C. Culturally responsive care
 - D. Mandatory group therapy sessions
5. What is a common reason for Hispanic/Latino individuals not seeking SUD care as mentioned in the document?
 - A. Limited availability of services
 - B. Lack of insurance
 - C. High treatment costs
 - D. Cultural barriers
6. What is one of the unique challenges faced by AI/AN populations living in urban areas regarding SUD care?
 - A. Better cultural identity
 - B. Higher rates of stimulant use
 - C. Limited access to Indian Health Service care
 - D. More access to social services

7. According to the document, what is a significant risk associated with stimulant use during pregnancy?
- A. Improved fetal health
 - B. Increased risk for pregnancy loss
 - C. Enhanced maternal mental health
 - D. Lower rates of substance use
8. What factor is mentioned as complicating women's recovery from SUD?
- A. Access to treatment
 - B. Financial stability
 - C. Support from peers
 - D. Familial responsibilities
9. What percentage of hospital deliveries were affected by maternal amphetamine use between 2014 and 2015?
- A. 2.4 per 1,000
 - B. 1.4 per 1,000
 - C. 0.7 per 1,000
 - D. 5.2 per 1,000
10. What is a common barrier to accessing SUD treatment for women experiencing homelessness?
- A. High treatment costs
 - B. Physical and transportation barriers
 - C. Lack of motivation
 - D. Availability of childcare services
11. What is a significant factor that affects MSM's willingness to disclose their sexual orientation in healthcare settings?
- A. Supportive healthcare providers
 - B. Fear of marginalization and homophobia
 - C. Access to mental health resources
 - D. High rates of HIV awareness
12. Which age group of MSM accounted for the largest number of HIV diagnoses attributed to male-to-male sexual contact from 2015 to 2019?
- A. Ages 18 to 24
 - B. Ages 35 to 44
 - C. Ages 25 to 34
 - D. Ages 45 and older
13. What percentage of MSM surveyed in a 2008 Internet survey had accessed drug or alcohol treatment in the past 60 days?
- A. 1%
 - B. 10%
 - C. 5%

D. 3%

14. What is the estimated percentage of past-year amphetamine use among transgender people compared to cisgender people?

- A. 1.3% higher
- B. 6.8% higher
- C. 10% higher
- D. 5% higher

15. What is the term used for individuals who identify with the feminine side of the gender spectrum and were assigned male at birth?

- A. Cisgender
- B. Transmasculine
- C. Transfeminine
- D. Nonbinary

16. What percentage of patients with unstable housing reported cocaine use according to the data from SUD treatment programs?

- A. 25%
- B. 32%
- C. 45%
- D. 42%

17. According to the 2020 Annual Homeless Assessment Report, how many Americans were homeless on any given night in 2020?

- A. 580,000
- B. 465,000
- C. 32,000
- D. 200,000

18. What is one of the recommended strategies to increase access to treatment for SUDs in rural communities?

- A. Using telehealth services
- B. Providing medical vans for outreach
- C. Building more treatment facilities
- D. Offering online therapy sessions

19. What is the relationship between cocaine use disorder and receiving SUD treatment for incarcerated individuals?

- A. No correlation
- B. Weak correlation
- C. Negative correlation
- D. Strong correlation

20. What is a significant factor that contributes to the high prevalence of stimulant use in rural areas?

- A. High population density
- B. Access to major routes for drug transport
- C. Low unemployment rates
- D. High educational attainment

21. What percentage of adults reported injecting methamphetamine (MA) between 2015 and 2018?

- A. 26 percent
- B. 24 percent
- C. 22.3 percent
- D. 21 percent

22. Which treatment was found to be more effective at reducing opioid use among patients with baseline cocaine use?

- A. Buprenorphine
- B. Methadone
- C. Naltrexone
- D. Cocaine

23. What is the primary mode of HCV transmission in the United States?

- A. Sexual contact
- B. Blood transfusion
- C. Injection drug use
- D. Mother to child

24. What percentage of patients in a study of OTP admissions from 2011 to 2013 had cocaine present?

- A. 24 percent
- B. 26 percent
- C. 21 percent
- D. 22.3 percent

25. What is the estimated per-act probability of acquiring HIV from needle-sharing during injection drug use?

- A. 9,250 per 10,000 exposures
- B. 63 per 10,000 exposures
- C. 23 per 10,000 exposures
- D. 138 per 10,000 exposures

26. What percentage of patients seeking treatment for SUDs experience episodes of major depressive disorder, also known as 'double depression'?

- A. 14 percent
- B. 22.6 percent
- C. 9.4 percent
- D. 2.5 percent

27. Which evidence-based screener can clinicians use to screen for depressive disorders?
- A. Generalized Anxiety Disorder scale (GAD-7)
 - B. Patient Health Questionnaire (PHQ-9)
 - C. Beck Depression Inventory
 - D. Hamilton Anxiety Rating Scale
28. What is a key recommendation for clinicians working with patients who have co-occurring PTSD?
- A. Rushing patients into discussing trauma
 - B. Using a trauma-informed approach
 - C. Avoiding medication evaluations
 - D. Focusing solely on SUD treatment
29. What is the estimated prevalence of ADHD in children ages 2 to 17?
- A. 2.5 percent
 - B. 10.6 percent
 - C. 9.4 percent
 - D. 14 percent
30. What should be monitored closely when prescribing pharmacotherapy for ADHD in individuals with a history of SUDs?
- A. Potential interactions with other drugs
 - B. Patient's dietary habits
 - C. Family history of mental illness
 - D. Social support systems

Name: _____

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| 1. [A] [B] [C] [D] [E] | 16. [A] [B] [C] [D] [E] |
| 2. [A] [B] [C] [D] [E] | 17. [A] [B] [C] [D] [E] |
| 3. [A] [B] [C] [D] [E] | 18. [A] [B] [C] [D] [E] |
| 4. [A] [B] [C] [D] [E] | 19. [A] [B] [C] [D] [E] |
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| 8. [A] [B] [C] [D] [E] | 23. [A] [B] [C] [D] [E] |
| 9. [A] [B] [C] [D] [E] | 24. [A] [B] [C] [D] [E] |
| 10. [A] [B] [C] [D] [E] | 25. [A] [B] [C] [D] [E] |
| 11. [A] [B] [C] [D] [E] | 26. [A] [B] [C] [D] [E] |
| 12. [A] [B] [C] [D] [E] | 27. [A] [B] [C] [D] [E] |
| 13. [A] [B] [C] [D] [E] | 28. [A] [B] [C] [D] [E] |
| 14. [A] [B] [C] [D] [E] | 29. [A] [B] [C] [D] [E] |
| 15. [A] [B] [C] [D] [E] | 30. [A] [B] [C] [D] [E] |